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EDITORIAL

GREETINGS. RETROSPECT

For eighteen years the Journal has shared the Christmas Spirit of the members of the South Carolina Medical Association most heartily. In retrospect the Journal is no stranger to sunshine and shadow, reflecting in this regard the experience of many of its readers. Of those who guided the Journal in those far off early years most of them are still living and in active practice.

In this time the whole picture of Medical Journalism in America has undergone a remarkable transformation. The proprietary Journal like the proprietary medical school has almost disappeared with its commercial ideals fostered by questionable advertisers. This wonderful development has been brought about by the American Medical Association and its incomparable Journal.

The South Carolina Medical Association numbers few more than it did eighteen years ago, but from an unorganized mass, has grown a smoothly running Scientific Society doing a high grade of work year in and year out, always advancing and keeping abreast with any other section of the country.

We feel that in a material way the profession in South Carolina will enjoy the holidays this year more than has been the case for some time. Yes, the doctor's happiness depends on his collections to a considerable degree and it is not beneath his

dignity to smile over the receipt of good fees this year. The Journal rejoices with him. The Journal has prospered. The advertising business has improved over that of any other year since we began to accept only ethical ads. This success would be impossible without the aid of the Co-operative Advertising Bureau of the American Medical Association.

Finally, doctor, we wish you a merry Christmas.

ORIGINAL ARTICLES

THE NEWER PHYSIOLOGY OF THE CAPILLARIES.

By Dr. J. Van de Erve, Charleston, S. C.

The fundamental importance of the capillaries in the body metabolism has long ago been accented by physiologists. It is in the capillary bed that all the anabolic substances along with gases and hormones, find their way out of the blood capillary lumina into the tissue spaces and thence into the contiguous tissue cells. All the katabolic material in reverse order, enroute to the eliminative organs or as internal secretions, passes into the tissue spaces and its fluid, from whence the bulk of the waste matter, entering the protruding end-lymph-capillaries, is carried outward by the lymph-current, the garbage stream of the organisms. The smaller portion of cellulifugal substance, notably CO2, goes into the blood capillaries and on into the venous circulation.

Nutritional alterations for good or ill in the cell—the ultimate unit of the organism—are intricately related to the proper functioning of the capillaries. The purveying fluids of the body are the blood, the tissue liquid and the lymph. The tissue fluid is the go-between, mediating the transmission of all the colloids and crystalloids that enter into the make-up of tissue into its cells and conveys from the cells all the secretions and excretions, directing them into lymph or blood stream. It stands to reason that capillary efficiency must be profoundly affected by cell conditions and unquestionably obversely, and any aberration from the normal activity of either capillary wall or tissue—and cell membranes must markedly alter the tissue fluid which is far and away the most essential of the three fluids just mentioned.

The very decidedly close interrelationship between capillaries and certain diseases is at once prognosticated.

For years the medical profession has been studying vasomotor phenomena. The epochal and monumental demonstration of vaso-constricting nerves in the rabbit's ear, by cutting the cervical sympathetic and vasodilation fibers in chorda tympani, by that pioneer physiologist Claude Bernard, has stimulated an interest only a little less than the new findings of endocrinology. Since the direct microscopic observation of the capillaries was begun, the concomitant investigation of the skin and its vessels in various diseases has admirably kept apace and abreast.

Conditions of the skin naturally first of all, but also shock, cardiac insufficiency, arteriosclerosis, nephritis, diabetes, aneurisms, acute infections, thyrotoxicoses, vasoneuroses, and dermatographic phenomena have been diligently and fruitfully studied and much and promising headway made for diagnosis and prognosis.

Read before the South Carolina Medical Association Charleston, S. C., April 19, 1923.

CAPILLARY MORPHOLOGY

The histology of the capillaries has been painstakingly worked out by Dr. Sabin of Johns Hopkins and her conclusions are now almost universally accepted.

Following Dr. Sabin's description, a capillary may be defined as a bare endothelial tube, very delicately functioning for the transmission of food stuff, hormones and waste to and from the tissue spaces which are adjacent to the tissue cells. Nerve fibers run along these tubes and, though not histologically demonstrated, doubtlessly make connections therewith, so that vascular capillaries are, on fairly convincing grounds, believed to be supplied with nerve filaments. The evidence for the innervation of the lymphatic capillaries is much more conclusive. In the larger vessels we have both motor and sensory nerves, but in the capillaries only the vasoconstricting fibers have been found.

The capillaries differing enormously in length and size, as is well known are interposed between the arterioles and venules, but where the former end and the latter begin has been furiously debated. And of course at the out-set it must be admitted that the exact point of structural change cannot usually be demonstrated; but as a working basis it may be stated, and is now generally followed, that, passing peripheralward from a larger artery, the outer adventitious coat is lost first, then the connective tissue layer between the muscle and endothelial coat is shed, at which juncture begins the arteriole, which in turn, denuded of its muscle cells fades away into a capillary or capillaries. The venule, into which one or more capillaries empty, gradually (though it must not be forgotten we are dealing with microscopical distances) assumes its distinctive features by first taking on its connective tissue—and farther centralward its muscular coats.

An item of consuming interest is the attempt made to demarcate sharply a point where the socalled arterial capillary terminates and the venule capillary originates. The histological characteristics of the capillaries being uniform, the distinction has no structural significance; but, if demonstrated, might be of very great functional importance, incisively localizing the exact point where the arterial changes into venous blood. It the nature of the case that must be a variant because of various and widely varying cellular demands and cellular output.

METHODS OF INVESTIGATION

As far back as 1865 Stricker of Vienna studied capillaries in the nictitating membrane of the frog and noticed by appropriate stimulation that they disappeared from view to reappear when the stimulus was withdrawn.

But the biggest advance was made by Lombard of Ann Arbor, who in 1912 invented a procedure that makes it microscopically practical to study by direct vision at once the morphology, function and pathology of capillaries and adjacent structures specially in the human skin. Lombard placed a drop of glycerine on the skin, preferably at the base of the nail, illuminated the field with a Nernst lamp and examined the area with a binocular microscope, having a magnification of 10-25.

Later investigators have highly developed the technic and achieved correspondingly better results, employing all the known physiological methods such as the electrical current, galvanic and induced, application of various drugs and chemicals and heat and cold, operative procedures, section and degeneration of nerve supply, mechanical stimulation, etc.

FINDINGS

Without any dissenting voice all students of capillary activity have independently arrived at the conclusion that the physiology of the capillaries and the venules demands revolutionary reconstruction and that our theories of peripheral resistance, so far exclusively assigned to the arterioles, because

supplied with nerve and muscle elements must be entirely recast.

Capillary dilatation and contraction are not merely nor mostly dependent on rise and fall of blood pressure, with its four or five controlling and regulating factors.

Beyond any reasonable doubt it has been established of late and may be succinctly stated that capillaries possess to a highly developed degree independent irritability and contractility through nervous and chemical control.

Hitherto, capillary dilation was explained in terms of a rise in blood pressure brought about by a lowering of pressure in the arterial branch or a raising of pressure in the venous side of the vascular tree—in both cases a volumetric change bringing a larger amount of blood as influx or reflux into the capillary bed, which passively widened. Constriction in the arterial and widening in the venous vessels would contract capillaries to original size.

Krogh (Journal of Physiology 1919 LII, 457) has pretty conclusively proven that arterial pressure does not appreciably affect capillary size—venous pressure may and does. If, he argues, arterial tension alone is responsible for the functioning of capillaries in any tissue, the capillaries of larger size and least resistance would monopolize the blood stream, and the blood would invariably flow through the same definite channels, distribution of gases hormones and nutrient material would be unequal and unfair, the cells lying in proximity to these particularly favored capillaries would be over-supplied and others farther away relatively starved—(a condition avoidable only by supposing all capillaries to be of the same size and length, resistance and functional activity, a supposition contrary to and a theory wholly at variance with easily demonstrated facts.)

Stricker (Vorlesugen, Wien 1883 page 675) removed the nictitating frog membrane from the eye, depriving it thus of its blood supply and yet dilation of the capillaries still took place under appropriate manipulation.

Roy and Brown (Journal of Physiology, 79-80, 11-323) tell us that in hyperemia, sequential to temporary anemia, the dilated capillaries remain expanded, though the internal pressure is only slightly higher than zero.

Under direct observation stoppage of flow in one capillary often is paralleled by a rapid current in an adjacent capillary though both receive their supply from the same arteriole. Moreover, strikingly enough, the flow in two such contiguous capillaries may be reversed where no alterations take place in the supplying arteriole. Some force distal to the arteriole, and, by other experiments it is also ascertained, proximal to the venules must account for this unusual phenomenon.

Krogh quoted above in another experiment presents evidence beyond the peradventure of the question-mark that capillary dilation is not due to blood pressure. He demonstrated that capillary caliber is significantly and pronouncedly less in resting than in active tissue. He studied thin muscles of living frogs and guinea pigs, injected india ink intravenously, then killed the animal to determine in which capillaries it had penetrated. In resting muscles few capillaries were found visible; in contracting muscles capillaries were wide open. The pressure in the arterioles of a contracted muscle would need to be several times higher than blood pressure calculations can mathematically and physiologically permit. Krogh was convinced that capillary dilatation and contraction are quite independent of blood pressure and capillaries have inherent and intrinsic power to enlarge and show constriction tonus.

That capillaries are contractile, though having no muscular wall, need offer no insuperable difficulty. Amoeba, leuco- and lymphocytes change their shape with chemical stimuli and alteration in surface tension. Just what the mechanism, productive of changes in size of the lumen in

capillaries is, awaits further investigation. It may be mediated by perivascular or spindle cells as Steinach and Kahn hold. Far more likely capillary contraction is occasioned by turgescence of edothelial cells making up the capillary wall, under nervous or chemical stimulation. This swelling of the cell bulges it out, encroaching thus on the lumen and at the same time by stretching tense the cell membrane so thins out the capillary wall that it becomes invisible.

Broadly stated nervous stimuli contract capillaries while chemical stimulation both contracts and dilates them, mainly the latter. Very probably too nerve regulation is extensive in character, correlating the whole or widely separated portions of the body, while chemical control is intensive in nature, elicits only local responses and plays upon the capillary tone maintained by nerve-action.

ELECTRIC STIMULATION

Capillary response to the electric current (the induced far more effective than the direct) is definite and, if critically localized, wholly independent of arterioles or venules.

Stimulating the sympathetic ganglia or the peripheral end of sciatic nerve always contracts the capillaries in frog's web, so that a capillary of 17 micron diameter after an interval of 5 to 10 seconds is reduced to 11 micron. A fall of arterial pressure even down to zero only alters the size of capillary diameter negligibly therefore the effect of a sympathetic stimulus must be direct.

Cutting the sciatic produces very marked vasodilation and unusually high blood pressure in capillaries, but in spite of this the application of an electric current directly on the capillaries contract them.

Tsang G. Ni in the physiological laboratory of the University of Michigan gave the most convincing proof. He so focussed the electric stimulus through a fine platinum needle at a single sharply defined point in the capillary that he evoked the most striking phenomena of corpuscular movement due to a very highly localized narrowing or blocking of the lumen—occasioned by the turgescent endothelial cell. (See chart).

Capillo-constriction of a single capillary can be demonstrated by the proper electric manipulation.

ACTION OF CHEMICALS

The response of capillaries to chemicals and drugs applied locally or given systematically may open a field of promising therapy. Some chemicals dilate others contract.

O tension seems to contract the capillaries, CO2 on the other hand distinctly dilates them. Lister explains asphyxia congestion of lungs on CO2 basis.

Locally applied adrenalin contracts both arterioles and capillaries; pituitrin contracts the capillaries not the arterioles, has a longer latent period and its effect is of far longer duration. Amyl nitrate (Carrier, Journal of Physiology, Aug., '22) produces a very rapid stream in the capillary bed—but dilates the capillaries only slightly and therefore doubtlessly expresses itself in the arterioles as well.

HISTAMINE AND SHOCK

The effect of histamine has assumed a very practical significance in view of its demonstrated relationship to traumatic shock.

The overshadowing symptom in shock is the sudden and pronounced fall in blood pressure which must be accounted for either in lessened volumetric out-put by the heart or lowering of peripheral resistance. Crile mistakenly believed the latter the responsible factor but a large number of investigators have demonstrated oligemia to be the responsible agent. The arterioles are constricted in shock. Vagus paralysis has been proven out of the question—the rapid heartrate is not due to that—though in a fast heart the diastolic filling period is ser-

iously shortened and intake much lessened. The force of cardiac contraction likewise is not responsible. The inadequate cardiac outflow is due to diminished influx of blood. Where is the blood? It is conclusively demonstrated to be in the capillary bed.

Histamine—(B. Iminazolylethylamine) obtained by decarboxylation of histadine (the latter one of the most important amino-acids—the building stones of the protein molecule)—acts as a powerful stimulant to smooth muscle when intravenously injected and simultaneously produces a frequently fatal lowering of blood pressure. Dale Maclevr and others, have furnished unassailable evidence that histamine constricts the arterioles and widely opens the systemic capillaries by local chemical action (not via sympathetic nerves) on the capillaries themselves. A man, to use the well-worn phrase, bleeds to death in his own vessels.

The clinically interesting conjecture is made (Turck of Chicago the first to do so) that surgical shock is oftenest due to rough manipulation of tissue which may set free histamine in the body, and thus induce shock—much aggravated by ether anaesthesia—little by NO2 which for that reason is the anaesthetic of choice. Recently Ranson, Faubion Ross (of the anatomical department of North Western University) have reviewed this whole subject and in the main confirmed the conclusions drawn but assert it is not a capillary endothelial poison.

DERMATOGRAPHISM

The phenomenon of dermatographism is supposed to be diagnostic of vasomotor instability; in advanced form, an angeoneurosis.

The latest work in this direction indicates that the red "tache" is certainly due to mechanical stimulation of the underlying capillaries, not via the sympathetic nerve supply. The white "tache" may be nervous or mechanical, more probably the latter.

Ryan (Quantitative Measurement of General Fatigue Am. J. P. 1918, 45) applies this test as a criterion of fatigue. Cotton, Slade and Lewis and Briscoe have made good use of this phenomenon in the cases of irritable heart exhibiting local asphyxia, due they say to capillary stagnation The rapid diffusion of O from capillaries to tissue occasioned by engorgement of capillaries in turn due to venule constriction is the first recorded instance of independent venule activity.

CAPILLARY PRESSURE

Many ingenious instruments have lately been devised to measure capillary pressure. The Danzer Hooker apparatus (shown here today) works fairly well, but in the nature of the case is limited in its usefulness as all blood pressure mechanisms are.

The correlation of functional activity of the vascular system with the capillaries in the delivery of blood to them, if accurately ascertained, is of diagnostic value.

Leonard Hill (British Medical Journal May, '21,) assures us that with delicate instruments he has actually measured both the diastolic and systolic capillary pressure under microscopic observation.

He keenly differentiated thus: Capillary pressure I take to be that pressure which just begins to lessen the flow in those capillaries wherein the flow is slowest. Diastolic pressure is that which just arrests the onward flow in the capillaries in diastole; systolic is complete stoppage.

CONCLUSION

All the facts of independent irritability and contractility so far scientifically established, seem to prove that the activity of the capillaries is quite opposite to that of the arterioles, that they cooperate with the venules and are the most vital elements in maintaining, with infinitely delicate precision, that balanced and nicely articulated and coordinated response in every cell, tissue and organ so indispensable to the economy and healthy functioning of the organism.

DR. W. F. R. PHILLIPS (Charleston):

It is historically worth while to mention the fact that about one hundred years ago—in 1825—Dr. James Black of London published the first work on infection (?) of the capillaries, and while his experiments were somewhat crude and not altogether convincing to himself, it is interesting to know that he seems to have reached the conclusion at that period that is being reached today, and that is that the heart's action has no control over the capillaries, that the capillaries control themselves.

It seems strange that in such a long time we have not gone back to the embryological point of view. The blood vessels first develop as capillaries with a single cell wall. These blood vessels controlled and moved the blood stream in the embryo before there were any walls. Therefore, if they moved embryologically why should they after they get into the adult suddenly lose the power of contractility and of moving? They have not lost it. That is the observation of anyone who painstakingly studies the capillaries.

Anyone who tries the simple experiment of injecting the capillaries will find that they are very irritable and that they will resist injection. In fact, if one wishes to make complete injection of the capillary blood vessels he must let the tissue die before he can get complete injection. If he injects fresh tissue he will fail.

Many years ago the position of the capillaries in the economy was observed. Luenbeck made the observation that it was in the capillaries that tissue changes went on, and in 1831 M. Hall published the first and best account of the relationship of the capillaries to the blood vessels. He said that the arteries tended to divide and divide and get smaller and smaller; the capillaries tended to divide and unite and remain the same size, and the venules tended to unite and unite and get larger and larger. I do not know of a better definition of the capillaries than that.

A CASE OF HAEMOPHILIA IN A NEGRO

By Julius H. Taylor, M. D., Columbia, S. C.

In the Ninth Edition of Osler & McRea's Practice of Medicine, we find it stated that Bullock discredits the reported cases of haemophilia in the negro and, further, the monograph of Bullock & Fields is cited as a model for accuracy of observation and of investigation. We, therefore, believe the following case of haemophilia presents a sufficient interest to render it worth reporting.

J. P., a negro man, was first seen by us November 15th and on November 21st, 1921, entered the Good Samaritan Hospital. Farmer, single, twenty-four years of age.

FAMILY HISTORY: Father fifty years of age, in good health; mother, forty-five years of age, in good health. One maternal uncle bit his tongue in falling and bled to death; one maternal aunt had a nine year old boy bleed to death following the pulling of a tooth; another maternal aunt had a son giving a history of profuse bleeding from slight skin injuries but died from other causes; still another maternal aunt had a boy twelve years of age who has frequently bled, especially from the nose, until he was much weakened; a maternal female first cousin lost a boy at nine years of age from hemorrhage following the pulling of a tooth.

Patient had eight sisters and four brothers. One brother bled to death following the removal of an eye, at the age of three weeks. The eye shortly after birth began to become more and more prominent finally resting on the cheek, the mother says, and upon removal it was found to have a large clot of blood behind it. Two other brothers died with no symptoms of being bleeders. The fourth brother still lives at the age of eight and does not bleed abnormally. None of his sisters have exhibited any bleeding tendencies. A son of one of his sisters bled to death

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at the age of one year from biting his tongue.

PERSONAL HISTORY: Measles, mumps, whooping cough and malaria; influenza in 1919; never had any operations; negative venereal history; habits—good. From early infancy it has been noticed that he bled excessively from slight injuries. In pulling one of his first teeth, he bled to such an extent that the doctor would allow no subsequent ones to be pulled. When two years of age, he jumped from a table, striking his left knee, shortly thereafter his knee began to swell and became very large and tight. Later it was lanced twice by his physician and his mother claims that a large quantity of "blood and corruption" was evacuated. He was invalided four months as the result of this. Throughout his life it has been noted that blows on his body were followed by tumors, which lasted from one to three weeks. Thirteen years ago, patient stuck a piece of cane in the sole of his right foot from which laceration he bled for about a week, becoming so weak that he was once found in the yard where he had fallen. He has frequently had slight cuts from which there was slight excessive bleeding.

PRESENT ILLNESS: In March, 1921, he stuck his left thigh on its anterior outer aspect just above the knee. This area soon swelled to the size of an orange with a discolored area in the skin. This tumor slowly became smaller but did not entirely disappear. In July, 1921, it began slowly to increase in size and continued to do so until it now occupies the anterior outer aspects of the thigh from the knee to its middle. The patient has continued to work but has found it increasingly difficult on account of interference with flexion at the knee and recently has been suffering a great deal of pain in using the leg. He entered the hospital for relief from the pain and swelling which incapacitated him for his work as a farmer.

PHYSICAL EXAMINATION: A well-nourished vigorous looking negro. Skin and mucous membranes negative; gandular system and reflexes negative; no tumors elsewhere about the body; teeth in fair shape; heart, lungs and abdomen normal; systolic blood pressure 120 mm, diastolic 80 mm. Occupying the lower half of the anterior outer aspect of the thigh is a large semielastic swelling. Definite fluctuation cannot be elicited, nor is there any change in temperature; there is a slight pain on pressure. This tumor permits flexion of the leg on the thigh of only about fifteen degrees. Beyond that it is painful and will not go. X-Ray picture would seem to show just above the lower end of the femur on its anterior outer aspect an irregular shadow suggestive of an injury to the periosteum. An aspirating needle introduced over the softest part of the tumor withdrew dark thick blood. Urine negative; Wassermann negative. This blood taken for the Wassermann at noon had failed to clot at 6 P. M. By the next morning there was only an incomplete clot formed. There was no clotting in a one millimeter tube in twenty minutes, at the end of which time the tube was used up. On November 21st, his blood was typed with that of his father and sister and all found to be type four. On this date he was given by indirect transfusion 40 cc of citrated whole blood from his sister whose clotting time was normal. On November 26th 40 cc of citrated whole blood was given from the same sister by indirect transfusion. November 29th, 40 cc of citrated whole blood was given by indirect transfusion from the father. The father's blood had a normal clotting time. On November 30th, the patient's coagulation time in a one mm tube was four minutes; in a one cm tube nine minutes. December 4th, 40 cc of citrated whole blood from the father given by indirect transfusion. On December 7th, the patient's coagulation time in a one mm tube was three and a half minutes. On December

9th, under ether anaesthesia a 2½ inch incision was made over the most prominent point of the swelling. Here a thick dark fluid blood was encountered about one half inch under the skin surface, and occupying the space between the bone and the muscles of the anterior thigh was a mixture of thick fluid blood and organized clot. With the gloved finger this clot was gently fragmented and most of it removed. It was noted that the blood seemed to clot normally on the dressings but the time was not observed. The cut surface of the skin and subcutaneous tissues bled continuously and were bleeding when the dressings were finally applied. A light gauze packing was placed in the cavity and a firm bandage applied. Three hours later the dressings were so saturated with blood that they were removed and fresh dressing re-applied, followed by a very firm bandage. This slow bleeding continued and at 10:00 P. M. he was given 30cc of untested blood subcutaneously obtained from a colored nurse. This seemed to have no effect whatever and on December 12th, all packing was removed from the cavity and fresh packing re-inserted very tightly, followed again by bandaging as firmly as the tissues would allow. On the 12th, too, his temperature in the afternoon went up to 104 and his pulse to 135. On the 13th, the wound was evidently badly infected though the oozing of blood from the cut skin surface continued. The use of Dakin's solution was instituted through tubes in the original incision. The man became weaker and more evidently septic. On December 14th, he was given 80 cc of citrated whole blood from his father with no evident effect and on December 16th, the patient died.

With this striking family history of male bleeders transmitted always through the female and with this history of bleeding from early infancy there can be no doubt of this being a genuine case of haemophilia in a negro.

This man was dark brown in color with typical features, though his mother is evidently strongly tinctured with white blood, a copper colored mulatto with features little suggestive of a negro. His father is the same type and color as the patient. Both parents, from whom, together with the patient, this detailed history was gotten, are unusually alert and intelligent. The patient had always lived with them and we believe this history to be accurate.

When one ponders the fact that not all the elements concerned in the clotting of normal blood are clearly understood, the uncertainties concerning the coagulation of abnormal and pathological blood is not to be wondered at.

As a basis for a clearer understanding of the more plausible theories advanced to explain the delayed clotting of haemophilic blood, permit us to briefly state first Howell's theory of normal blood clotting, which satisfies best the known facts based upon experiments. Bernheim in his monograph on Blood Transfusion, states that Dr. W. H. Howell of the Johns Hopkins University has probably done more work in this field than any other investigator. As stated by G. W. Whipple, this theory holds that there are five factors concerned in the clotting of normal blood, namely,—prothrombin, antithrambin, thromboplastin, fibrinogen and calcium. All of these elements, except thromboplastin, are present in circulating blood. Within the blood vessels, prothrombin is held in combination with antithrombin and intravascular clotting is thereby prevented. When, however, blood is shed the antithrombin is neutralized by the thromboplastic substance of the tissue juices (blood cells, endothelial cells, platelets, etc.). The liberated prothrombin now combines with the calcium and the thrombin which results converts soluble fibrinogen into the insoluble fibrin or the clot.

With this as a basis of his studies, Howell first proved that as compared to normal blood there is a most marked delay in the spontaneous coagulation of haemophiliac blood and that the deficient coagu-

lability was due to some permanent alteration in the properties of the blood. These deficiences devolve themselves finally into an actual subnormal amount of prothrombin in the circulating blood, and since antithrombin was proved to be present in normal or slightly subnormal amount, Howell concluded that "the essential condition in haemophilia, which is immediately responsible for its delayed coagulation is a subnormal amount of prothrombin in the circulated blood". He therefore says "haemophilia may be defined as a condition limited to the male in which the coagulation time of the blood is immoderately prolonged in consequence of a deficiency in the amount of the contained prothrombin with the additional characteristic that the defect is transmissable by heredity in accordance with the so-called law of Nasse."

On the other hand Sahli has suggested that the disease was due to a disturbance in function of the walls of the blood vessels only, whereby the secretion of thromboplastin or a similar substance which normally is secreted when the wall of a blood vessel is cut or otherwise injured does not take place. Clotting in the end of the cut vessel therefore fails to occur. It takes place elsewhere however, when the blood comes in contact with the prothromboplastin from other tissues.

The literature to which we have had access would seem to indicate that workers in this field generally accept Howell's as the most tenable explanation.

The work of Minot & Lee seems to show that the blood platelets play an important role in the coagulation time of the blood. In haemophilic states they find that their contained prothrombin and thromboplastin for some reason is not available. They have shown that normal platelets added to haemophiliac plasma initiates prompt clotting, whereas haemphiliac platelet added to haemophiliac plasma in many times the concentration on which normal platelets were added to haemophiliac plasma only caused a much delayed clot.

Whatever the element or elements needed the transfusion of whole blood from a suitable donor will best supply this deficiency. When transfusion is not available in the presence of a bleeding haemophiliac not controlled by pressure, there may be tried the injection of foreign serums, the infiltration of the surrounding tissues with human whole blood or the dropping of whole blood on the bleeding site as done by Sayer.

Finally, there are two features of the haemophiliac to be borne in mind as mentioned by McLean. First, that in the presence of a moderate hemorrhage the time of clotting shortens, called by E. A. Wright, who first drew attention to this characteristic "hemorrhagic increase in the blood coagulability". Blood tested at this time may coagulate as promptly or nearly as promptly as normal blood. Owing to this fact, the haemophiliac may have many excessive bleedings with spontaneous cessation even in the absence of treatment before the final one that takes him off.

Second, McLean quotes Addis as reporting that the blood coagulation time may vary from day to day in the inter-hemorrhagic periods. In one of his patients it varied from 38 to 80 minutes and in another 50 to 90 minutes. Therefore, definite conclusions as to the coagulation time in individuals showing a bleeding tendency should not be based upon one test.

OSTEO-CHONDRITIS DEFORMANS JUVENILIS

A Review—Report of Cases

W. A. Boyd, M. D., Columbia, S. C.

This most interesting disease of the hip joint was first called to the attention of the medical profession by Legg, of Boston, who reported four cases of his own, and one of Goldthwaite. Subsequently *Calve* on July 10, 1910, published an article in the Revue de Chirurgie recording ten cases. In 1913, Perthes reported cases of this condition and suggested the name "deforming osteo-chrondritis of the superior extremity of the femur." Since then various men have recorded their cases, and suggested a name for the condition: "Quiet hip disease," "Pseudo coxalgia," "coxa plana," "osteo-chondral trophopathy of hip joint," etc. The condition, however, is most spoken of as "Perthes disease," notwithstanding the indisputable facts that both Legg and Calve preceded Perthes in writing of the condition.

The disease itself is a deforming affection of the upper femoral epiphysis.

1. The etiology of this diseased condition is still a subject of discussion, and while Legg in his original publication seemed to consider *traumatism,* with resulting circulatory changes as the probable cause, other writers have advanced various factors as the immediate and I might say predisposing cause.

2. *Phemister,* reporting the pathological findings of a case operated upon by him is inclined to consider that the findings strongly indicate the infectious origin of the disease, although he did not obtain any definite evidence.

3. *Legg* and *Kidner* have each reported a case operated upon, and the broken down focus from the neck of the femur showed a *staphylococcus aureus* infection upon being cultured. Kidner believes that the process is primarily a sub-epiphyseal hematogenous infection of the neck, which interferes with the circulation of the head of the femur.

4. *Blanchard* says that he has not been able to locate a tonsillar or other source of infection in a single case.

5. *Freiberg* suggests that the disease is of a secondary infectious origin, and does not think trauma is a causative factor.

6. Davis, (G. G.) was of the opinion that traumatism was a factor, also some constitutional cause.

7. Roberts, writing in the Journal of Orthopaedic Surgery, 1919, reports eight more cases occurring in his practice, and is more convinced that syphilis is an ethiological factor, all of his cases improving under antiluetic treatment, and while they gave negative Wassermanns, they all gave evidences of inherited syphilis.

8. *Fenner,* in reporting his cases, states that he has been unable to find any evidences of inherited syphilis, all of his cases giving a negative family history and negative Wassermanns.

The cases occurring in my own service have also failed to give any evidence of inherited lues.

9. *Michelson* does not believe the cause is of an inflammatory nature, that it is of a nutritional or vascular origin rather than traumatic; while Roderick (21) stresses the view of traumatism as the cause.

10 Soderlein attributes the condition to some anomaly in the upper end of the femur, and this entails, or is supplemented by some developmental disturbance, possibly an abnormal ossification of one or both of the epiphyses.

11. Moller feels that as the affection does not spread, it seems probable that it may originate in some nutritional disturbance in the region. Some lesion of an artery interfering with the normal blood supply.

12. Perthes says that the trouble is a destructive process in the interior of the

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head of the femur, and the joint is not affected. The cause seems to be some disturbance in the nourishment of the head of the femur, probably from some injury to the artery supplying it, possibly of traumatic origin.

13. While Higman reiterates that the trouble is some dystrophy of the head of the femur, and urges that the affection should be known as "osteo-dystrophy of the hip joint," rather than osteo-chondritis, as all agree that there is no inflammation. He proposes the term "osteo-dystrophia coxae," as expressing the true nature of the affection, that either primarily or in consequence of some extraneous circumstance, the upper end of the femur has failed to develop properly.

14. *Digitala* does not regard tuberculosis, the infectious diseases, or trauma as pathological causes, but that the origin of the disease must be looked for in a congenital alteration, either of the epiphyseal cartilage of the upper end of the femur, or of the epiphyseal nucleus, which gives way to processes of ossification which are insufficient and irregular.

15. *Mouchet* regards the condition as a growth osteitis of the epiphysis, a minor degree of deforming arthritis of the hip joint, while Zaaeger says that owing to some congenital dystrophia, some developmental defect in the ossification center of the head of the femur, the part does not develop quite normally for a time, but finally as growth proceeds, the condition rights itself. That anatomical studies of cases have confirmed his assumption that the developmental defect is mainly the interposition in the ossification center of irregular islands of cartilage, and that it may occur with or without trauma.

16. *Murk Jansen,* writing in the Journal of Orthopaedic Surgery, says that later publications have confirmed his view "that a congenital latero-position of the femoral head, associated with due preservation of the acetabular roof and its rim, was the primary cause of Legg's disease."

"(a) Though congenital in its primary cause, develops only after some years of walking, the neck must be widened out before the characteristic flattening and clearage will occur.

"(b) That coxa plana is often seen to develop a short time after infectious diseases have been sustained; the injurious agents have temporarily enfeebled the power of growth of the bone and contributed to the plasticity of existing bone.

"(c) That signs of local infection are alive to the process."

On the other hand, *Calve,* writing in the same journal a month or two earlier, says:

"1. Osteo-chrondritis is not a congenital affection.

"2. That the phase of the invasion of the epiphyseal nucleus is latent from the clinical view point.

"3. That the clinical phase corresponding to the period when the child first begins to complain of pain is considerably later than the real beginning of the trouble.

"4. That to the beginning of the clinical phase there is a corresponding radiographic picture showing an established and characteristic lesion. A laminated and fragmented epiphysis.

"There is an astonishing variance between the radiographic findings and the first clinical manisfestation. This variance proves indisputably that the debut of the trouble, whatever its cause—infectious, traumatic, or specific is clinically silent."

17. *Platt,* from a clinical and radiographic study, advances the opinion that the condition is most probably due to definite infection of low grade virulence.

Although in all of my cases there was a definite history of traumatism, and in only two a previous infectious history, one child having had several attacks of pneumonia, and a second hypertrophied tonsils, with a definite family history of tuberculosis, both father and mother having had pulmo-

nary tuberculosis, I do not feel justified in assuming that traumatism with its resulting interference with the blood supply is the true etiological factor, because, after all, as in other bone affections, the trauma may be the predisposing element only, lowering the vitality of the part and thus enabling a low grade hematogenous infection—which the previous resisting powers of the child had held in abeyance—to gain a foothold. Such an infection would in itself interfere with the nutrition of the part. While we have not been able to determine the exact etiology of the condition, these factors can be considered determined; that is:

1. That it is not hereditary, even though *Schwartz, Calve, Brandes, Levy,* and *Eden* have reported cases occurring in more than one member of the family or in different generations. *Brandes* has suggested that in Perthes disease, there is some congenital predisposition towards the development of bony softening.

2. That it shows a definite predilection for the second half of the first decade of life.

3. That more boys than girls are affected.

4. That it is generally unilateral.

5. That the condition may have been in existence long before the clinical manisfestation.

PATHOLOGY

The pathology of this condition has generally been discussed from a theoretical standpoint, because of the lack of opportunity to study the diseased tissues themselves, all of the cases going on to recovery. However, *Perthes,* in the discussion of a series of cases of his own, reported his findings in one case he had operated and removed an overgrowth of abnomal cartilage extending down into the fairly normal bone. From this, in connection with his clinical study, he assumed that the disease was a *peculiar* atrophy of the upper epiphysis, brought about by destruction in the sub-chondral region. But this specimen, *Kidner* says is of little value because it was taken from the joint surface, a region which the X-Rays show to be little affected in osteo-chondritis. *Legg* also reports one case which had been operated and a septic focus curetted from the neck of the femur. He did not believe, however, that the focus was in any way responsible for the change in the head and neck; but from the very frequent history of traumatism in the disease, he concludes that the changes in the epiphysis, sub-epiphyseal region and neck of the femur, were due to an interference in the blood supply, following traumatism at the epiphyseal line..

Since then, Kidner has reported his findings of a case operated upon by him, in which a well walled off cavity was opened, and from which was curetted a soft, grayish-red material, suggesting broken down cancellous bone. A culture made from this material showed a staphylococcus aureus of low vitality. Phemister in a recent article has also reported a case operated by him, and from which negative cultures were obtained. That, however, does not preclude the possibility or even probability that an infection might have been present.

Krenter, from a study of a case and from the investigation of *Pommer,* concludes that the condition must be regarded as a type of arthritis deformans and cannot be considered a distinct disease process of the infantile hip joint. He lays particular stress on the fact that it is not a juvenile, but an infantile disease type, and therefore the endo-secretory influence of the still quiescent puberty glands play no part in the development.

Therefore, with the exception of Kidner's case, with its cultural findings, we are dependent on the radiographic findings for the pathology, and in that, we are apt to be mislead, because these cases have generally been active long before coming under observation, and we have no way of arriving at any definite radiographic conclusion as to the beginning of the process.

The true pathology must therefore await determination until definite postmortem studies are available, or more cases in the early stage are operated, with subsequent laboratory study of the material removed.

SYMPTOMATOLOGY

The symptomatology of this condition has not been the subject of discussion. All of the writers apparently agree:

A healthy child, more often a boy, suffers some traumatism to the hip joint, and then later begins to limp. It is the limp that usually attracts the attention of the parents. There is slight pain, rarely of any marked degree, which is not surprising when we remember that the disease is one of the ossification center, sub-epiphyseal, which is protected by a thick layer of cartilage and without nerve fibres and does not involve the joint surface. Muscle spasm is absent. No night cries, temperature nil, or occasionally a slight rise to 99 degrees, which when present, is not constant.

Examination of the limb shows elevation of the trochanter and trochanteric thickening, slight atrophy of the thigh, limitation in external rotation and abduction, flexion is not impaired. Trendelenberg's sign is present.

Radiographic findings: A thinning out of the calcium salts in the epiphysis, giving it a laminated appearance, with softening or total destruction of areas in the bone substance of the head, flattening out of the epiphysis, thickening and shortening of the neck and deformity of the head of the femur.

PROGNOSIS

All of the cases, treated or untreated, get well, with always, however, some deformity of the joint.

DIAGNOSIS

It is very probable that many of the so-called cases of tuberculosis coxitis of the earlier writers, that recovered without marked deformity, were in fact cases of osteo-chondritis. While it is of no real importance to the child in so far as future functiom is concerned, for a case of *Perthes* to be diagnosed tuberculous coxitis, we must not, as Davis has reminded us, err on the other side, such an error, as you can readily appreciate, would be of manifest detriment to the child's future. *Platt* calls attention to this fact, "When the hip joint is found on examination to be fixed and painless, the position is often one of slight flexion, combined with adduction, in striking contrast to the abducted position of the early tuberculous joint." Moller noticed that in his cases of osteo-chondritis the children ran around with their mates and made no effort to spare the leg, even when there was some tendency to pain in it and considered it an important diagnostic sign.

The X-Ray appearances will eventually determine the diagnosis. Other conditions that might be mistaken for osteo-chondritis are: Osteo-myelitis of the hip, juvenile deforming arthritis of the hip, and coxa vara. A careful clinical study and investigation, together with the radiographic findings, should easily determine the diagnosis. In truth, as Mouchet says, "Symptoms are nothing, radiography everything."

TREATMENT

The sole object of treatment must be the attempt to lessen the destruction and flattening out of the head of the femur as far as possible. Cases treated or untreated get well, but with more or less deformity of the head and neck of the femur. How is that to be achieved? By conservative measures, such as recumbency, fixation and removal of the superimposed body weight; or should these cases be operated? Phemister from his experience is inclined to the operative measures, but warns us, that we should wait until the acute symptoms subside before operating, for fear of setting up an arthritis. If we are to wait until then, why subject the child to any operative risk. The damage has been done, and while it is possible that by operating the final result might be hastened, but not appreciably bettered, I cannot in view of our present knowledge see the advisability. Platt says, "Operative treatment directed

towards the removal of the dominant lesion, has no present place in the therapeutics of the disease." Blanchard in his article draws the following conclusions:

2. The head of the bone that continues in functional use during the acute stage becomes (flattened out, or) obliterated, wholly or in part by attrition of body weight or softened bone.

3. The head of the bone that is protected by mechanical support, suffers only the same atrophic changes as the adjacent bones.

4. During convalescence the head redevelops rapidly under mechanical protection, slowly and less perfectly without protection.

Personally, I feel that absolute immobilization of the joint during the early stages of the disease by the application of a long plaster spica, followed later, as the condition begins to right itself, by recumbency and heliotherapy in the young children for a variable period, as determined by the radiographic findings, before weight bearing is permitted, or in older children, after the need of the recumbency and immobolization is no longer apparent, by the application of a short spica and the use of crutches and a high shoe on the unaffected side, will lessen the deformity and future impairment of the joint. The commencement of weight bearing being dependent upon the radiographic findings.

REPORT OF CASE

Case 1.—C. W., male, age 15, white school boy. March 25, 1920—October 26, 1922.

Family history: Negative.

Previous medical history: Negative.

Present illness: Eight weeks ago while wrestling at school he hurt his right hip. Had a little pain at the time which disappeared. Then he began to have a slight limp, with pain in the hip at times. The pain was never severe. A physician was called who diagnosed rheumatism and treated him for six weeks. On March 25, 1920, he was referred to me for treatment, with a diagnosis of tuberculosis of the right hip.

Examination: A general physical examination was negative with the exception of the right hip and thigh.

There was no muscle spasm, and no pain upon jarring the joint or upon movement of joint. There was considerable limitation in external rotation and abduction, no limitation in flexion or adduction. The right thigh was one-half inch smaller in circumference than the left thigh. There was some thickening over the trochanter. During his stay in the hospital under observation his temperature did not go above normal.

Calmette negative. Wassermann negative.

X-Ray examination: Flattening of the head and neck of the femur with thinning out of the head. There was no involvement of the joint surface.

Diagnosis: Perthes disease.

Treatment: Recumbency in a long plaster spica from costal margin to toes of right foot, including the left side of pelvis, cast being carried down over the trochanter of left leg. Cast was worn for a period of six months, then a short spica was applied with high shoe on sound leg and crutches allowed. Six months later all casts were removed and heliotherapy and crutches for another six months.

Results: The boy has a useful limb, practically no limp, no pain or disability. Says he feels as well as he ever did.

Case 2—J. C., white, male, 3½ yrs. old. June 28, 1922.

Family history: Father had pulmonary tuberculosis twelve years ago. Treated in a sanatorium in the Adirondacks for seven months and discharged as cured. Mother also a positive tuberculosis history. Both parents are now well.

Previous medical history: Negative.

History of present illness: About three months ago, began to complain of pain in

leg. Sometimes he waked up at night complaining. On June 25th he complained of pain in his hips, particularly the left hip, and was kept in bed for three days. No record of his temperature was taken by his parents and no physician was called. No definite history of traumatism although child had fallen several times.

Examination: A fairly well developed child, of good color. Heart and lungs negative. Throat negative with exception of enlarged, slightly infected tonsils.

Extremities well developed and no atrophy observed. Some limitation of external rotation and abduction. No limitation in flexion, abduction or internal rotation left of thigh. Child walks with a slight limp, favoring the left leg. No muscle spasm.

Von Pirquet was done and reported negative. Wassermann negative.

X-Ray examination by Drs. Gibbes and Rodgers: "There is slight shortening of the neck of the left femur, with some broadening and flattening of the femoral head, and a slight absorption of bone salts about the center of ossification."

Diagnosis: Perthes disease. Infected tonsils.

Treatment: Child was referred to Drs. Whaley and Caughman for a tonsillectomy, and subsequently a long plaster spica from costal margins to toes of left foot, including entire pelvis was applied. Norweigian cod liver oil, one teaspoonful three times a day was prescribed.

October 3, 1922: Child returned for examination. Has had no pain or discomfort. No temperature. Cast removed.

X-Ray examination by Drs. Gibbes and Rodgers: The head of the left femur shows a considerable absorption of bone salts. Left thigh shows an atrophy of one-half inch. No shortening of leg.

Child sent home to be kept in bed recumbent, and to have twice daily exposure of hip to the sun rays, increasing the period daily until he is exposed during the entire period of sunlight. Voluntary movements of leg and hip permitted.

October 30, 1922. Child examined. Has had no pain or discomfort. No temperature. Skin of thigh and left hip quite bronzed. Limitation in abduction and external rotation still persists. There has been no weight bearing since last examination.

X-Ray examination by Drs. Gibbes and Rodgers: "General improvement in left hip joint. There is a thinning of the femoral head and neck."

November 28, 1922: Child is walking better. No real limp, but slight awkwardness in his gait. Abduction and external rotation of left femur still limited. No pain, no tenderness, no temperature.

X-Ray examination by Drs. Gibbes and Rodgers: "Shortening of the neck is very marked and there is a distortion of the head with a narrowing of the epiphyseal line. There is a considerable absorption of bone salts, but there appears to be marked improvement since the last examination."

Case 3—S. M. T., girl, white, 6½ yrs. Nov. 4, 1922.

Family history: Father and mother alive and well. No family history bearing on case.

Previous medical history: A bottle fed baby. Marasmic until six months of age, when she reached the normal average size. Did not make any efforts to walk until age of twenty months. Had been under-nourished. Several attacks of broncho-pneumonia and seemed to "catch cold" upon the least exposure. No diphtheria, scarlet or other infectious disease.

History of present illness: About one year ago, child began to complain of pain in her right leg extending from hip down to heel and foot. At times she would not play because her leg pained, but generally she ran around and played with her playmates but with, as her mother noticed, a peculiar limp or awkwardness. In May

1922, she was seen by a physician, and her parents were advised to take her to the mountains. Just a day before leaving for the mountains the child was seen by the writer, but no opportunity was had for an examination. On November 1, 1922, the child was again seen by the writer and an examination made.

The child apparently was robust and well developed for her age. She presented no evidence of any systemic illness. Throat, ears and mouth negative. Heart and lungs negative.

Von Pirquet negative. Wassermann negative.

Lower extremities: No shortening of limbs. No appreciative atrophy. No limitation in any movements of the left leg. Right leg: No limitation in movements excepting in external rotation and abduction of the hip. No muscle spasm. A feeling of thickening over right trochanter. Gait awkward with a tendency to limp and favor the right leg.

Feet: Long, narrow, and somewhat flat, but no pronation. The right foot was held slightly rigid, but could be passively moved in all directions.

Diagnosis: Weak flat foot, "Perthes disease" (probable).

Treatment: In order to relieve the pain in the foot over the instep and the spasticity, adhesive strapping of foot was done.

X-Ray examination of hip ordered.

November 4, 1922: X-Ray examination by Drs. Gibbes and Rodgers: "There is a slight shortening and thickening of the neck of the right femur. No changes are noted in the joint."

Conclusions: From the clinical history and examination a diagnosis of a probable Perthes was made, which the radiographic findings confirmed. The pain in the foot was undoubtedly due to the spastic weak foot which was relieved by suitable shoe and strapping with adhesive plaster. The limp continued for three or four months, but has now disappeared.

April 6, 1923: Examination does not reveal any impairment of function in the right hip, excepting a limitation in abduction. No limp, no shortening, no pain.

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ALL LEGITIMATE PROGRESSIVE SCIENTIFIC MEDICINE AND SURGERY SHOULD BE GOVERNED BY ONE CODE, AND THERE SHOULD BE BUT ONE HIGH STANDARD OF PROFICIENCY IN THE PRACTICE OF MEDICINE

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Having been for years thrown in a legislative way in different spheres from most medical men in our State and Association, I am probably prone to discuss, at times, subjects of a more obstruse nature, to other members of our Medical Association; subjects, apart from the mere discussion of a disease or some surgical case, but I hope you can grasp my idea, not only from a medical and surgical standpoint, but from my legislative experience, and knowing the efforts by quacks and various cults to make thrust from a so-thought legitimate and legislative standpoint, I have been so impressed with the proper relations that legislation should bear to the only one and true system of the practice of medicine and surgery and a proper code governing same, that I am of an unyielding and firm opinion, that, all Legitmate Progressive Scientific Medicine and Surgery should be governed by one high standard of proficiency in the practice of medicine. Other professions do not divide their professions up into sections, or degrees of proficiency—you do not have two or three grades of dentists—nor, do we have two or three grades of lawyers—some of a grade to practice in magistrate courts—some in county courts—some in supreme and federal courts, but when a lawyer is licensed to practice he is considered a lawyer and is entitled to practice in all the courts. They are not licensed by degrees of ability and this should be the standard in the medical profession, and we should not recognize any piece-meal business about it. All branches of our profession, which go to make up our Allopathic and only true scientific system of medicine and surgery,

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based on a proper and true knowledge of anatomy, physiology, materia medica, chemistry, surgery and a knowledge of hygienic and sanitary laws, together with electricity, X-Rays and soforth, and should be so worked out by our schools and so standardized, taking all remedial agents and proper methods in which there are any good, or an advancement in our teachings and education. There may be some small items of truth to be picked from any system, but not enough to cause the establishment of a separate profession and we should embrace every noteworthy idea—for instance, as Dr. W. F. R. Phillips suggests, "We should recognize and teach physical exercise", which will be a valuable adjunct to our therapeutics and other things which might be so included.

Our schools and teachings should so recognize and present every known and worthy suggestion and practical idea, that everyone may be in possession of same, and our system should be so broadened and standardized that there will be no necessity for a division of ideas and claims of superknowledge along any one line, and a proper knowledge of all recognized therapeutic agents, shall be so understood, with such proficiency, that, there will be no necessity for but one high standing professional code of ethics.

During the past session of the General Assembly, there was a strong and persistent effort made to "put over" on us a "blur", an incubus to Scientific Medical Endeavor, a "slur" to *decent high-standing progressive enlightenment* in our Profession. I fought it, it was killed in the Senate.

Then a bill was introduced to divide the Medical Examination Board and give them (the cults) a member or two, on the State Examining Board. This I am unalterably opposed to—you can't *mix oil and water*, and I consider that it will be an everlasting disgrace to us to submit to any such a mixture and coalition. It will not work, it will be unequally yoked and cause friction. I hope never to see the day when our association and profession will submit to such an indignity, and should such a thing ever be perpetrated by any Legislative enactment, then every member of our examining board should resign and *stay resigned*. We are the "Whole Cheese" or we are nothing, and I believe in standing by our professional rights and dignity and honor. No science was ever endowed with more of the beautiful handiworks of nature of an all-wise God, than is protrayed in the human anatomy and on which is based a grand and wonderful scientific profession, and I will never stand and see her honor trailed in the dust of the unworthy, or her standing brought down to an equal with these inefficient cranks not posted in the proper knowledge of medicine. These inroads on the *true and only correct* and honorable and worthy system of medicine, by which many are making a short cut to success from a mere financial standpoint, are not now springing up, but these "cults" sprang up years ago. Grecian history tells us of their frequent uprisings and disapprovals and disappearances etc., and as early as 1527 Paracelsus, who was of Teutonic origin, and by his false and cranky notions and at variance with all scientific teachings of that day, and over three hundred years ago, was alienated and "kicked out" of their recognized medical profession, and history shows, none have ever heached high attainments. They have never had a code governing their unscientific principles and ideas, and history furnishes no record of any set rules or code, by which they are governed, and as there is but one code, all who expect to obtain proficiency enough to be recognized as an enlightened practitioner, should be required to comply with our methods of attainments and to come under our rules and regulations and be so governed.

The *legitimate* and *recognized* Allopathic system of Medicine and our profession is

now confronted with such unprofessional onslaughts, that history presents no parallel to such a record, but we should not despair, nor be daunted. Disaster is not written in our vocabulary. There will be no "Grampian Hills" in our system of Medicine, like in old Scotland over which the Highlanders and the Lowlanders would pass to slay each other. The Common Weal, Professional Advancement, and High Standard with Public Pride, will be a future delight of all our people, and there will be a burning cry to elevate the Scientific practice of Medicine and Surgery to *one high plane* and all shall be governed by *one and only one honorable and recognized code of ethics.*

MOVE ON, LET PROGRESS BE OUR MOTTO

The public and the world will not be satisfied with men of but one idea, but will demand broader minds. We will yet see bright stars shining through the clouds in our professional horizon and a halo of light around about us.

DR. MARION H. WYMAN (Columbia):

Some of you were not here at the meeting of the House of Delegates last night when this subject was thoroughly discussed. It is certainly a most worthy paper and an ideal time to present the subject, because before, we have put it off until the Legislature met and then tried to counteract the chiropractors. This second bill Doctor Crosson mentions was put in by a man on our side, and last night a committee was appointed to handle the situation, so I feel sure we shall cut off the chiropractors next year.

DR. W. P. CORNELL (Columbia):

I would like to add that the plan which seems the only feasible thing is for each individual physician to use his influence with his legislator at home. To wait until they get to Columbia and then have the Columbia physicians and the medical society go there in a body, will not do the work. You must know your own legislators personally and have them know you. The influence must be exerted on them from you at home. The idea is for you to get out and hustle from now on, because this bill is at the third reading and ready to go through and put a chiropractor on the medical board. We must beat that before next January. Every doctor should go out among his patients, especially those who have been treated by the chiropractor and not benefitted, and get affidavits from them against the chiropractor. Hundreds of affidavits were presented before the Legislature from people who claim they were helped, and the legislators held up a sheaf of these and said, "Here we have evidence from the chiropractors, but not a single word of evidence against them. We must have written proof against the chiropractor." With that and Doctor Phillips' papers, I believe we can once and forever squelch them.

DR. ERNEST COOPER, (Columbia):

One method of attacking the chiropractor has been adopted by Doctor Epps of Sumter, in which he has written a series of articles for publication in the newspapers. I have read one or two of these articles, and I would suggest that steps be taken to have them published in all the county newspapers throughout the State.

DR. M. H. WYMAN: Those who are in close touch with the situation have decided that we do not want too much publicity unless it is started from some central body that have worked out the plan definitely, because the news will spread that we are persecuting these fellows. I would suggest that that be left to the committee.

DR. J. E. EDWARDS, (Darlington):

We had a meeting and served a supper and invited our Representatives and stated the question to them, and it seemed to have its affect, as Darlington County voted unanimously against the chiropractors. One of the Representatives from another county that I happen to know said that he had at least ten telegrams sent to him about one hour before this vote came up, from people who had been treated by chiropractors, asking him to support them, but not a single word from the medical profession.

DR. W. P. TIMMERMAN: Some of our most enthusiastic men are advocating giving these people recognition—requiring that they pass the same examination as other people and make them proficient. It is doubtful propriety to say you must not give them any recognition. A compromise should be made. There are those who work just as hard for this Association as we do who think it is not wise to be too hard. I commend Doctor Crosson's paper, although I do not agree with him fully.

DR. D. M. CROSSON (closing):

You may just as well turn the thing loose and give them a place on the Board as that. I have been up against this thing in the Legislature. I know what it is. I warned you last year and told you what was coming. It took a hard fight in the Legislature on both Houses to keep it down. We finally killed the thing in the Senate last year, and after all this, then some of our men who ought to be loyal to us go back and say, "Well, we will give them a member or two on the Board." This is continually creeping up, and you had just as well hit it in the head and kill it now. I do not intend to spend all the force and energy and influence I have eternally trying to hold the thing down. I will hit it a blow and kill it if I can. I do not propose to see the profession that I honor and have fought for and worked for for forty-three years trailed in the dust. So long as I represent you in the Senate of South Carolina I intend to fight this thing. You must get behind your Representatives and let them know that you are going to protect your own interests and professional rights. I have not much respect for any man who would compromise with any of these cults, and I never intend to do so.

GRADENIGO'S SYNDROME; WITH REPORT OF CASES

By M. R. Mobley, M. D., Florence, S. C.

This symptom complex or syndrome was first described by Gradenigo in 1904 and later in 1907, and is characterized by three main symptoms; (a) an acute otitis media, (b) isolated paralysis or paresis of the abducens nerve of the side corresponding to the diseased ear, and (c) intense and extraordinary persistent pain, localized, not as ordinarily in the mastoid region, but in the frontal, temporal, and parietal regions of the same side corresponding to the area supplied by the fifth nerve.

The Pathology of the condition consists in an invasion of the cells of the apex of the petrous pyramid of the temporal bone, with a subsequent involvement of the dura over the tegmen of the mastoid in a localized basilar pachymeningitis. In most instances recovery follows. However, a diffused meningitis may occur, ending fatally. We are thus brought to the conclusion that the paralysis of the abducens in this disease is the first evidence of a meningitis, otogenic in origin, which in certain cases ends in recovery and in others resulting fatally.

The following is a report of two cases: The first occurring in my experience while on duty as Chief of the Eye, Ear, Nose and Throat service at Camp Jackson, S. C.

Read before the South Carolina Medical Association, Charleston, S. C., April 19, 1923.

Private S. L. R., age 21, admitted to hospital February 9, 1921; convalescing from measles. Complained of pain in and back of left ear for the past few days with the development of a "knot" back of the ear, with a subsequent purulent discharge from this ear. A simple mastoidectomy was done on February 10, 1921. The mastoid wound continued to discharge, and when patient came under my observation April 1, 1921, he was suffering from intense headache over frontal, parietal, and temporal regions, left, and had developed a paralysis of the left abducens nerve. X-Ray of both mastoids showed a highly pneumatic bone with a haziness and loss of cell detail on the left. Wassermann negative. On April 10, 1921, I performed a secondary mastoidectomy, finding a number of mastoid cells which had not been exenterated at the previous operation. The tegmen antri was exposed and found to be necrotic, and on its removal the underlying dura was covered with unhealthy granulations. The tegmen antri was resected sufficiently to permit of free drainage, and the mastoid wound closed. The patient made an excellent recovery, the mastoid wound healing within fifteen days, and when I resigned from the service June 7, 1921, the abducens nerve

had almost completely recovered its function.

Case 2: Colored male, age 48, giving history of ear-ache, left, early in January, 1923; followed by rupture of drum with purulent discharge five days from onset. Ear continued to discharge. The last week in January, patient developed Influenza; followed by broncho pneumonia. Patient was admitted to hospital first week in February. Examination revealed right ear still discharging, and there was some tenderness and edema over mastoid. Tympanic membrane showed pouting, tit-like perforation, indicating retention, in the posterior inferior quadrant. Examination showed a paralysis of the left abducens nerve with a convergent squint O S. Patient complained of severe and constant pain in the left frontal, parietal and temporal regions, corresponding to the distribution of the trigeminal nerve. Examination of the nose and throat was negative. The chest showed physical signs of a broncho-pneumonia. Blood count showed, total white cells 13,500, polys 73 per cent. Spinal fluid cell count was 60 cells to the c. c. Blood and spinal fluid Wassermann negative. X-Ray of both mastoids showed a highly pneumatic process with haziness and loss of cell detail on the left side. Urine negative. Under gas anaesthesia a liberal incision was made in the left ear drum, following which there was a disappearance of the mastoid pain and tenderness within 48 hours. Left ear continued to discharge for two weeks, at the end of which time white blood count showed 12,500 cells, with 69 per cent polys. Spinal fluid count showed 46 cells to the c. c. In view of the above findings a simple mastoidectomy was decided upon, same being performed under local anaesthesia. The mastoid cells were broken down and filled with pus and granulation tissue. A thorough exenteration of all cells was made in-so-far as possible. The mastoid wound and perforation in the drum membrane healed within 3 weeks, and after inflation the hearing in the affected ear was normal. The tri-facial neuralgia has gradually cleared up and at the time of writing this, the sixth nerve shows some evidence of regeneration.

DR. C. W. KOLLOCK (Charleston):

The cases reported by Doctor Mobley are of great interest, not only because they are rare, but on account of the unusual combination of symptoms. First, there is an acute middle ear inflammation which runs on the ordinary way with some pain, and perhaps discharge, but not interfering with the ordinary routine of life. Suddenly, most intense pains are felt in the frontal, temporal, parietal and perhaps the occipital regions. If the drum membrane has not been incised, this will become worse, or if it is done, all pain may be reduced and the condition apparently improved, until suddenly and without warning diplopia begins, which is caused by paresis, or paralysis, of the sixth or abducens nerve. The pathology has been puzzling, and even now is not satisfactorily explained to all. It was first described, as the author of the paper has stated, by Gradenigo, and perhaps a short review by E. H. White of 57 cases reported by Gradenigo may be of interest. He divides them into three groups. The first group contains 24 cases which ran the classical, typical course to recovery after the drum membrane had been incised and drainage established, and ventilation of the Eustachian tubes accomplished.

The second group consisted of 29 cases with typical syndrome, but complicated by other lesions such as paralysis of the seventh nerve, labyrinthine inflammation, or optic neuritis, which he regards as independent complications of the otitis rather than characteristic of the lesion that causes the syndrome.

The third group had four cases which in addition to the syndrome had meningitis and died. The otitis was characterized by retention of pus in the middle ear, caused by too small an opening in the drum membrane. In 32 cases, 18 had no perforation, or it was late and generally too small. Paracentesis or enlargement generally brought about remission of symptoms, pain and paralysis, showing definite relations between otitis and paralysis of the sixth nerve. Pain, not characteristic of the fifth pair, sometimes

comes late, after discharge begins, and at appearance of paralysis. The latter occurs suddenly and without warning. In 37 cases noted paralysis occurred in 3 between the fifth and tenth day; in 8 between the twentieth and twenty-fifth day, and in 6 after the fifty-sixth day.

Typical cases usually recover. Complicating symptoms, as in the second group—meningeal irritation and mastoid complications, are otitic and have no direct bearing on the syndrome. Twenty-four mastoids in the 57 cases were done generally to help drainage and not for the direct mastoid involvement.

M. Mainescu reported a case greatly improved after the Eustachian tube has been thoroughly opened, drained and ventilated. This leads us to think that the theory of Calicetti as to the pathogenesis has much to support it. The osseous shell of the Eustachian tube is situated near the apex of the petrous bone; the sixth nerve is attached to the apex of the pyramid; inflammation of the tube affects the bone cells, produces an extra-dural focus of pachymeningitis, and the apex of the pyramid, and thus affects the abducens nerve, all of which emphasizes the importance of early recognition of middle ear inflammation and prompt and effective drainage of that cavity.

DR. W. F. R. PHILLIPS (Charleston):

Doctor Mobley asked me yesterday about the relation of the trigeminal veins to paralysis of the abducens nerve. I think the explanation given by Doctor Kollock is correct. The abducens passes practically against the bone and there is a little notch that marks the position of the abducens. Therefore, any pressure or inflammation that presses this vein causes a rather acute condition and paralysis could very well follow.

DR. M. R. MOBLEY (closing):

I was much interested in the pathology as given by Doctor Kollock. As Doctor Phillips says, the position probably explains the paralysis of the sixth nerve. However, I do not see that that could explain the trifacial neuralgia. Other authorities have reported in addition that the seventh nerve is occasionally involved, and some times the optic nerve. To my mind the occurrence of localized meningitis and the attendant pressure there is the most feasible explanation of this paralysis.

SOME THINGS THE PEOPLE SHOULD KNOW ABOUT THE REGULAR MEDICAL PROFESSION VERSUS QUACKERY

By Dr. L. O. Mauldin, Greenville, S. C., President of the South Carolina Medical Association.

Mr. Chairman and Gentlemen of the Second District Medical Association:

It is a great pleasure to respond to your invitation to be here and address this association today. I am grateful for the opportunity to hear the many interesting papers that have been read and discussed, for they have been on subjects of unusual importance and have been presented forcibly and discussed in such a way as to make me know that the Second District Medical Association is doing its full duty as a component part of the South Carolina Medical Association.

I have selected as my subject, "Some Things the People Should Know About the Regular Medical Profession Versus Quackery," and while it is impossible to tell in a short address all the things the people (the laymen) should know on this subject, I wish especially to emphasize a few facts that are necessary for the people to know, and necessary for the regular medical profession to tell the people in order that the conscientious layman can know "Who is Who" when it comes to selecting a doctor to treat himself or his family.

In the first place the public should know that the County Medical Society, the District Medical Association, the State Medical Association, the Southern Medical Association or the American Medical Association has each for its fundamental object in organization "To promote the science and art of medicine and the betterment of pub-

Read before the Second District Medical Association, Ridge Springs, S. C., July 18, 1923.

lic health." This being true, these organizations are emphatically opposed to all things that are against the health of the people; are emphatically opposed to anything that militates against the progressive advancement of the science and art of medicine and consequently are opposed to anything or any cult that has the appearance of quackery or anything that looks like it is trying to fool the people and get them to take the treatment at the hands of any cult or quack whose idea is to get directly or indirectly into the good graces of the people and relieve them of their hard earned substance by a schemingly contrived system of fooling the layman who has no definite way of telling the merits of a regular physician from a quack.

Perhaps some will say that Barnum's Axiom still holds true, that, "A sucker is born every minute." This I believe is true, but I am one who believes that the sucker can be educated and the sucker today may not be a sucker tomorrow. I also believe that the people themselves are doing some good hard thinking about matters of this kind which pertain to their welfare and every existence. When a layman gets to thinking of the matter of what constitutes a good physician, he is reluctant to fall—to anything that has the appearance of irregularities.

The people should know that the first section in our principles of medical ethics states that "The regular physician is a member of a profession that has for its prime object the service it can render to humanity, reward or financial gain should be a subordinate consideration."

The people should also know that there are more than one hundred thousand physicians of the regular school in the United States and most of these physicians are members of the Great American Medical Association and of their respective county and state medical societies and their individual and united object in life is to keep the people well and restore them to health if they get sick. These physicians of the regular school of medicine get their training in schools and hospitals like Harvard, Mayos, Bellevieu, Hopkins, Tulane and hundreds of other hospitals and institutions over the United States that teach the same methods of practice that are taught in these great seats for medical learning and research.

These one hundred thousand regular physicians, scattered through out the United States in every city, town and community, can and should extend a powerful educating influence over the people as to the things they should know about selecting a physician.

The people should also know that with all the accumulated knowledge of thousands of years of scientific research, the fountain of youth has not yet been discovered and there is no one thing that is a panacea for all diseases and while each man in the medical profession well knows that he has been instrumental in prolonging many lives in his own individual practice we know there is no antidote for "Death". Verily, "They that walk the earth are but a handful to those who slumber within its bosom."

The people should know that the ethics of our profession requires an obligation to the public as is set forth in the following section; "Physicians, as good citizens, and because their special training qualifies them to render this service, should give advice concerning the public health of the community. They should bear their full part in enforcing its laws and sustaining the institutions that advance the interest of humanity. They should cooperate especially with the proper authorities in the administration of sanitary laws and regulations. They should be ready to counsel the public on subjects relating to sanitary police, public hygeine and legal medicine."

The people should know that in the state of South Carolina there are more than one thousand physicians of the Regular School

and the majority of them are members of their county societies and the State Medical Association, having no other object in being members of these organizations than to make themselves more efficient in their work and to thereby better safeguard the health and lives of the people of their community and their state.

The people should also know that the Medical Laws of the State are for the people of the State and not for the doctors. But the laws are constructed by the people and should be construed by the people to mean that their intent and purpose is to enable the doctors to better safeguard the health of the people. In this enlightened age it won't do to let the blacksmith extract teeth, the barber do surgery or the "Jack at all trades" practice medicine. The people must know that it is necessary to have laws to find out who is qualified to do these things.

The people should know that year before last and last year the South Carolina Legislature had before it for consideration bills which were separate but each year they became known as the Chiropractic Bill. The object of these bills was to give the Chiropractic Cult a separate licensing board in order that the so-called Chiropractors might be licensed to practice Chiropractics without qualifying as physicians of the regular schools have to do. The people should know that the use of any methods or means for the treatment of the sick is practicing medicine and all who follow the practice as a profession should be qualified under the same law in order that the people may be protected from incompetents and unscrupulous grafters. For this same reason the law should be very strict. The people should know that under the present medical practice law of South Carolina a chiropractor can get a license to practice, but the law certainly requires him as well as anybody else to qualify and this is *just* for the reason that it protects thepeople and is not *unjust* to any honest minded man who wishes to do the right thing toward the people and the state.

The people should know, however, that the Chiropractor's claim for his method in the treatment of disease is unsound and being unsound is dangerous and makes the chiropractor, unqualified in other lines of medicine, a dangerous man in the community. The Chiropractor claims not to believe in the Germ Theory, claims that by adjustment on the spinal column to be able to cure all diseases. This makes him a dangerous man in a community, for he is liable to be making his fancied adjustments on patients with acute infectious diseases while the infectious organisms are spreading with more than geometrical progression.

The people should know that the regular medical profession is opposed to the chiropractor for the protection of the people and because the chiropractic claim is unscientific and a recognition of it is an impediment to the advancement of science, and certainly not for any remuneration that a regular physician may get whether the chiropractor is licensed or not.

The people should know that in both years the lawmaking body of this State had to spend much valuable time and thousands of dollars of the people's money considering the merits and demerits of these bills.

Many honest men in the South Carolina Legislature were about to become led astray by chiropractic lobbyists, who had gathered in Columbia from other states to help put across a law designed for the benefit of a few Chiropractors and to the detriment of the whole people of this great state. The people should know that any law affecting the practice of medicine in any state should be carefully weighed for it just as certainly affects the destiny of the people. However, many well meaning legislators were shrewd enough to get posted and find out what their duty was to the people they represented and voted

right and killed the Chiropractic Bill, a worthless measure which was calculated to license a number of quacks to practice a so-called cult founded upon unsound principles. Being unsound and if licensed would flaunt a stigma of disgust into the face of every regular physician.

The people should know that a bill like this before the legislative body of the state takes up a great deal of valuable time of the lawmakers and by so doing involves the useless expenditure of thousands of dollars of the people's money and if it was wrong for such a bill to pass in 1922 it was wrong for a similar bill to pass in 1923 and it will be against the interest and welfare of the people for it to pass in 1924. If this or a similar bill comes up again in the next legislature, and it is almost sure to come, the people should know enough about the conditions as to say, "Let it die a borning" and not spend the time of the Legislator and the money of the people any more on a measure the merits of which have been well considered at previous sessions of the legislature.

The people should know that the Chiropractic propaganda is unsound and unscientific and they should know it so well that they can say to their legislator, "If Chiropractic is right, then the whole system of science is wrong". It differs from the Regular School of Medicine in that its hypothesis and conclusions are unscientific.

If Chiropractic is right we had as well tear down our great institutions of learning, do away with our great and small hospitals, tear down our research laboratories, scatter to the winds the accumlated knowledge that science has garnered through the ages and convert the energies of more than one hundred thousand good physicians in the United States into a conglomeration of spine pinchers and scheming advertisers.

As long as the followers of any cult can qualify to practice medicine through the channels that regular physicians do they may be entitled to the privilege of doing as much practice or adjustment as the people may allow themselves to be inflicted by such treatment, but such people should be brought to a full knowledge of what they are doing and that they are doing it with their own free will and accord. Then let Barnum's Axiom take its course.

The people should know that it is best for all humanity that every person who practices medicine or any form of it or cult which involves the treatment of the sick or the institution of methods to keep people well, should qualify by a thorough examination before a state or a national board unprejudiced in its principles, skilled in scientific attainments, that knows the human body thoroughly in health and in diseases of all kinds and who can make a diagnosis of the condition or disease that is being treated.

The people should know that while the followers and friends of the different cults are lobbying around our State House trying to pull the wool over the eyes of our legislators and convert them to a belief in their form of practice in order to get laws passed to favor their unscientific methods, the Regular Physicians are going in and out of the homes over this great state doing all in their power with science at their command to alleviate the suffering of the sick and the afflicted.

The people should know that the regular physicians in the world cure ten thousand cases compared to one that the irregular cures.

Gentlemen of the Second District Medical Association, as members of the Regular Medical Profession, I want to tell you that the South Carolina Medical Association was organized seventy-five years ago and the Seventy-Fifth Anniversary was celebrated at its last meeting in Charleston last April. In the lapse of time since the organization of this great state association down to the present minute the Regular Medical Profession of the world has been

doing things coincident with the advance of science and by virtue of the organization the profession of South Carolina has been keeping pace with the advancement of science in other parts of the world.

I wish to tell you and I wish you to tell it to your legislators and to the people that it can be said without fear of successful contradiction that every discovery pertaining to medicine and surgery of any importance in the last seventy-five years has come through the thought and labor of the Regular Medical Profession or of those directly connected with it, and if a Charlatan, a quack, an irregular of any kind has invented or worked out anything in science that has been, is now or will be worth the price of a piece of darkness, it has not been brought to light to enrich and bless humanity.

Anaesthesia, antisepsis, asepsis, diphtheria antitoxin, typhoid antitoxin which has saved hundreds of thousands of our people and been an economic saving of millions of our money, X-Ray, Radium, Heliotherapy, the mosquito as a transmitter of malaria and yellow fever—a discovery which alone is worth billions of dollars to the human race annually, hook-worm, serum therapy, the isolation of vitamines, the use of the microscope, the use of the opthalmoscope, the use of the cystoscope, the discovery of numerous micro-organisms, among them being the tubercle bacillus, gonococcus, streptococcus, spirochaetada pallada, the discovery of the Wassermann reaction, the Widal reaction, salvarsan, insulin and a thousand and one more things associated with the practice of medicine in the form of medicine itself, or sanitation, prevention, diagnosis and treatment.

These are a few of the things that have been brought to light principally by the regular medical profession or of those directly connected with it, and it is well for the Regular Profession to hang these thoughts in the memory of the people and in the memory of those who make the laws for the people in such a way and with such emphasis that they can never be forgotten.

Verily, while the Charlatan, the quack, the cure all advertiser are spreading their ill conceived propaganda and fleecing the people in many unethical ways, the regular medical profession has been and is doing things for the advancement of science and for use in the alleviation of the suffering of humanity.

UROLOGY

MILTON WEINBERG, M. D., Sumter, S. C.

NON-SPECIFIC INFECTION OF PROSTATE AND VESICLES

Dr. G. G. Smith in the Boston Medical and Surgical Journal, October 11, 1923, reported a study of 40 cases of non-specific prostatitis and vesiculitis. He states that "In the selection of these, all cases were rejected in which there was a history, definite or suspected, of gonococcus infection, even though the infection had occurred years before. In considering the cases with a urethritis of non-specific origin, those rejected even though they showed lesions in the prosterior uretha, in which the prostatic secretion did not show a definite increase in the number of leucocytes, or in which there were no definite changes in consistency of prostate and vesicles upon palpation. In other words, the cases included in this study show: (1) no history of gonococcus infection, (2) definite evidence of inflammatory changes in prostate or vesicles.

The ages of these patients fell into the following groups:

11-20, inclusive	3
21-30	10
31-40	15
41-50	8
51-60	4
	40

Twelve of the forty were single. Of the 28 married men, a majority were fathers of children."

Dr. Smith states that it is impossible to say in most of the cases just what had produced this infection. Two of the patients had had mumps some years precious with involvement of the testicle and one had had an epididymo-orchitis caused from the typhoid bacillus; another man had an abscess of the urachus six years before. Some of the cases of non-specific prostatitis and vesiculitis followed influenza infection. It would be impossible to state the relations of these factors in the production of prostate and vesicle infection.

Dr. Smith tabulates the presenting symptom as follows:

Urethral discharge	15
Frequent urination	7
Loss of sexual power	4
Sexual irritability	3
Fever and pluria	3
Sterility	2
Arthritis	1
Iritis	1
Enuresis	1
Testicular pain	1
Perineal discomfort	1
Dysuria and hematuria	11
	40

Bacteriological examination showed only a scanty growth from the prostatic material. He states that the growths frequently contain several kinds of bacteria such as diphtheroids and cocci of various types but was unable to find any predominating class of organism. The bacillus coli was found in one case.

This report by Dr. Smith is very interesting in that it deals exclusively with cases in which there could not have been any previous gonorrheal infection. In addition to this type there is a very large number of prostatic and vesicle infectious seen in patients who have previously had gonorrhea; the gonorrhea has completely disappeared, in some many years before; and the exist-

ing non-specific infection may be due to the injury to the tissues sustained from the gonorrheal infection.

It is of great importance to realize that there may be present an infection, sometimes acute, of the prostate and the patient be almost without symptoms of a local nature. In many cases when there is present a septic condition of undetermined origin, it is well to examine the prostate; the prostate and vesicles should always be examined in the search for foci of infection.

SURGERY

SAMUEL ORR BLACK, M. D., Spartanburg, S. C.

FECAL LEAKS AND FISTULAE

C. B. Lockwood, Oxford Medical Publications

Lockwood here uses the term fecal leaks and intestinal fistulae or leaks synomymously. Strictly speaking a jejuneal or duodenal leak is not a fecal one as these structures do not contain real feces.

He divides all leaks into congenital and acquired and the latter he subdivides into traumatic and pathologic.

Congenital leaks are very rare. He has seen only two and they were through the umbilicus. They are almost impossible to close by local procedure around the navel. Usually, a laparotomy is necessary, as only in this way is it possible to absolutely determine the nature of the underlying cause, and unless the cause be removed, the effect is likely to persist.

Traumatic leaks are more common. They occasionally follow suppurative appendicitis with abscess formation and are induced by necrosis of the bowel wall. As the abscess is drained by the surgeon, the intestinal wall is liable to be perforated.

Before operating for this type of leak the author advises waiting a sufficient time for the acute inflammation to subside, for the inflammatory thickening to disappear and until the intestinal walls themselves have regained their tone sufficiently to again hold suture material.

In the majority of instances this type of leak tends to heal spontaneously; however, occasionally some 6 to 8 months are necessary.

There are a number of other lesions occurring in the abdomen, which may give rise to fistulae.

Surgeons, operating for impacted fibroids, for pus tubes and ovarian cysts may accidently injure or perforate the bowel wall and, not know it for several days, till the patient developes peritonitis or fecal discharge.

Pathological leaks are those resulting from infectious processes either acute or chronic.

As examples of the former, he cites instances of appendiceal abscess, in which the fistulous opening is already present at time of the operation. Other instances, such as suppurative diveritulitis or salpingitis or cholecystitis might do the same thing.

As examples of the leaks caused by chronic processes he cites lues, tuberculosis, actinomycosis, and malignancy. These leaks are dangerous to life, difficult and obstinate to treatment.

Tuberculosis peritonitis in the absence of fluid is a bad field in which to operate as these wounds so frequently suppurate and a tuberculous intestinal fistula is a serious consideration. With free abdominal fluid, laparotomy, and nothing more, not infrequently cures the lesion.

Intestinal walls diseased with lues, actinomycosis, tuberculosis or malignant degeneration have very little repairing process in themselves and the least manipulation or surgical interference is frequently followed by a leak. This type of leak does not tend to heal by itself and a formidable operation, usually with enterectomy is necessary.

"The nearer the stomach the more difficult to cure the leak."

Duodenal fistula are almost always fatal. Jejunal fistulae are likewise highly dangerous. They prevent assimilation of food and they pour onto the abdominal wall a toxic digestive material which causes quick destruction of the tissue and much suffering.

In operating for fecal leaks be certain that the bowel lumen below the leak is patulous and that a foreign body is not left behind.

Avoid purgation, use enemas with extreme caution, administer an easily assimilable diet, and remember that the most serious obstacle to success is the ever present danger of sepsis, peritonitis.

SOCIETY REPORTS

FIFTH DISTRICT MEETS

The semi annual meeting of The Fifth District Medical Society was held in Camden, S. C. on November 8th, and was one of the most successful meetings since the organization of the society in 1914. Dr. John I. Barron, President, of York presided. Papers of exceptional value and interest to the profession were read. These were freely discussed and all were benefitted, Sixty doctors were in attendance and this included several of our friends from Columbia, Sumter and Charlotte. The next meeting will be held in York next May.

We were the guests of The Kershaw County Medical Association and were served a most delightful dinner, while music was rendered by four of Camdens most attractive young ladies. The society has never been more royally entertained and expressions of appreciation were heard on every side.

The society endorsed the recommendation of The State Board of Health that rabies vaccine for immunizing dogs be furnished by this board free of charge. It also endorsed the county dental clinics being conducted by The State Board of Health under Dr. E. A. Early. A letter from Dr. L. O. Mauldin, President of The South Carolina Medical Association, was read. Dr. Mauldin asked the doctors to exert their efforts to keep the chiropractors from having the legislature pass their "Model Law Bill."

PROGRAM

FIFTH DISTRICT MEDICAL SOCIETY

Semi Annual Meeting

Camden, S. C.

Thursday, November 8, 1923.

Program

10:30 A. M.

1—Opening Prayer—Rev. W. H. Hodges, Camden, S. C.

2—Address of Welcome—Hon. H. G. Garrison, Mayor of Camden, S. C.

3—Methods of Conducting Dental Clinics in South Carolina—Dr. E. A. Early, State Director Dental Clinics, Columbia, S. C.

4—The Significance of Kidney Colic—Dr. Milton Weinberg, Sumter, S. C.

5—The Value of Skin Grafting—Dr. W. W. Fennell, Rock Hill, S. C.

6—Inspection—It's Value as a Diagnostic Procedure—Dr. J. D. McDowell, York, S. C.

7—Diabetes and Insulin—Dr. William Allen, Charlotte, N. C.

8—Salient Eye Facts of General Interest —Dr. J. G. Johnson, Charlotte, N. C.

9—The Present Day Prevention and Treatment of Diptheria—Dr. W. E. Simpson, Rock Hill, S. C.

10—Technic of Spinal Anesthesia—Dr. C. M. Rakestraw, Chester, S. C.

2:30 P. M.

Dinner—Masonic Banquet Hall.

George A. Hennies, M. D.,
Secretary.

MINUTES

REPORT OF SPECIAL REFERENCE COMMITTEE

Tc the President and Members of the House of Delegates:

Gentlemen:

Your special committee appointed to consider and digest the different recommendations made by your officers and committees in their reports at the meeting of the Association last year, beg to report as follows:

A. The recommendation of the committee on hospitals relative to longer terms of service than one year for members of that committee.

B. The recommendation of the fraternal delegate to the Georgia Medical Association relative to short daily sessions of the House of Delegates, as practiced by Georgia, in order that questions arising during the general session might be disposed of without waiting over till the next year. And also

C. The recommendation of the same official relative to establishing a medical defense system, similar to that of Georgia's, where the attorney of the Association answers in the name of the Association any suit brought against its members for damages resulting from professional services.

D. The recommendation of the committee on scientific work relative to the adoption of a plan or scheme for conducting the scientific activities of the Association.

E. The motion offered by Dr. William Western creating a legislative committee consisting of one member of every county society to assist in securing the necessary appropriations for the Board of Health and the Medical School.

Relative to the foregoing recommendations, your committee recommends as follows:

The recommendation of the committee on hospitals is concurred in and extended to apply to all standing committees, that is, that all standing committees, be appointed for longer terms than one year and so ordered that a majority of the terms shall not expire in any one year.

Relative to the two recommendations of the fraternal delegate to the Georgia Medical Association, your committee recommends their favorable consideration. Specifically, it recommends that the Annual Session of the Association be three days and that the House of Delegates meet daily, if necessary, for such length of time as may be required to despatch whatever business may be before it. A program somewhat as follows might be observed:

First Day: House of Delegates, 9 a. m. to Noon. General Session, 2 p. m. to 6 p. m.

Second Day: House of Delegates, 9 a. m. to 10 a. m. General Session, 10:30 a. m. to 12:30 p. m., 2:30 p. m. to 6 p. m.

Third Day: House of Delegates, 9 a. m. to 10 a. m. General Session, 10:30 a. m. to whatever time needed to complete program.

Much time could be saved the House of Delegates by having the reports of officers and committees published in advance in the Journal, say the issue immediately preceding the Annual session. The House could then proceed at once to the consideration of the matters involved therein without the loss of time consumed in listening to the reading of these reports. Better consideration would naturally be given to the subject matters of such reports. Under existing practice there is not time for reflection and deliberation. Committees cannot be blamed if they put but perfunctory effort into their work when they see their endeavors so indifferently treated as at present.

The recommendation of the fraternal delegate to Georgia, relative to a medical defense

system, whereby the Association should answer through its own attorney suits for damages resulting from professional services brought against member of the Association seems to the committee a proper activity for the Association to assume. However, it is taken for granted that the Association would not assume any suit not recommended to it by the county society of which the defendant was a member, or in event of no county society, by the Council of the Association.

In regard to the report of the committee on scientific work, the committee thinks that the only way to determine the wisdom of that committee's recommendation is to give them a trial. If the plan should prove itself good it would need no other recommendation, if it proved itself no better or even worse than present practice, it would need no other condemnation. There seems to the committee but one way to decide the matter and that is by trying the experiment. Your committee recommends that the experiment be tried.

Regarding the legislative committee contemplated in the motion offered by Dr. Weston, it seems to your committee that this committee would be too large and unweildy to be effective. It suggests that in lieu the President and officers of the Association be ex-officio such special committee with power to call to their assistance such other members of the Association as in their opinion may be serviceable.

Although not within the contemplated sphere of your committee, nevertheless in examining the recommendations above reported in so far as to what Constitutional changes would be involved, your committee was impressed with the fact that the Constitution and the By-Laws might be revised with advantage to all concerned.

Signed: W. F. R. Phillips, Chairman.
C. B. Earle,
G. A. Neuffer.

MINUTES HOUSE DELEGATES CONCLUDED REPORT OF THE COMMITTEE ON SCIENTIFIC WORK, 1923.

To the President and Members of the House of Delegates:

As noted in the report of the committee submitted last year, the By-Laws prescribe that the committee on scientific work shall determine the character and scope of the scientific proceedings of the Association subject to the instructions of the House of Delegates. The By-Laws also charge the committee with preparing and issuing the program, announcing the order in which the papers and discussion shall be presented.

Your committee reports that in the discharge of these duties it has pursued the same course of "masterly inactivity," to use a once famous phrase of a statesman of the long ago, that characterized its activities of last year. Some explanation of its conduct was given then, nevertheless, the committee feels that it is due the Association to explain again why it is in default, even though the explanation be more or less repetition.

The By-Laws in making it the specific duty of the committee to determine the scope and character of the scientific proceedings of the Association also impose on the committee's action, the qualification that it shall be subject to the instructions of the House of Delegates. Evidently, this means that the committee must report its program to the House of Delegates for its sanction before going forward with its consummation. It is obvious that the determination of the scope and character of the scientific proceedings is a matter requiring some considerable time for deliberation and maturation. What now are the working facts and circumstances pertaining to the committee's activities? The House of Delegates is adjourned sine die when the committee comes into being, the practice being for the newly elected president to appoint the committee for his year; another House of Delegates will not convene until a few hours before the time set for the program to go into effect. Obviously, the committee has not time to receive instructions from the House of Delegates and perfect a scientific program in the few hours that intervene between the assembling of the House of Delegates and the opening of the scientific session of the Association. But, as if this alone were not to make the committee an agency of "masterly inactivity," the By-Laws also charge the Secretary with one of the duties of the committee, namely, the preparation and issuing of the program. To add a little more to the perplexity of the situation, the Secretary is by the By-Laws a member of the committee and by practice he is not. Maybe the By-Laws have been changed, for a recent copy of the Constitution and By-Laws received from the Secretary had noted on it that "Several amendments have been made since 1913 but of no

great importance". Whether our genial Secretary meant to imply that any amendment fundamentally changing the composition of the committee and its functions was of no great importance, or committee and its functions were of no great importance, the commttee will leave to pundits to determine.

Apart from the By-Laws and their defects, however responsible they may be; the fact stands out that the committee on scientific work is not functioning as a committee determining the character and scope of the scientific proceedings of the Association. As far as two years experience can illuminate the situation, whatever determination of scope and character of the scientific proceedings there has been, has been by the secretary and the president of the Association. Here let your committee disavow any intention of criticism of any one. However, the committee feels that it owes it to itself and to the Association to state the facts as they appear, leaving it to the Association to act as it may deem appropriate.

Your committee feels that a committee should function or it should cease to exist, and having endeavored to account in part for its impotency it should endeavor to show how it could be made potent, if it be the judgment of the House of Delegates that it should be.

In the opinion of the committee two measures are necessary: First, the House of Delegates should altar the composition of the committee; and second, it should actually instruct the committee annually relative to the program it wished provided for the next session.

As to the composition of the committee: Scientific custom makes the president the leader of the organization. Common experience recognizes that by virtue of his office the secretary of an organization is better acquainted with the membership of the organization than any other member or several other members. Therefore, a committee on scientific work should have as part of its personnel the president and the secretary of the organization; the first, because he is the leader pro tempore, the second, because of his general acquaintanceship with the individual membership. By joining to these two, two or three other members selected because of special qualifications in some of the parts of the art and science of the subject, a committee would be constituted that would have all the elements necessary to function—the leadership of the president, the information of the secretary, and the special knowledge of the selected members.

Your committee therefore recommends that the committee on scientific work be a committee of five members, namely, the president and the secretary, ex-officio, and three members to be selected either by election or APPOINTMENT. And further, with respect to the selected members that the terms for which selected shall be not less than three years and so arranged that the term of but one shall expire annually. Such a committee would have continuity of purpose and work and could therefore be expected to function better than the ephemeral creation that submits this report.

The second measure mentioned above can be accomplished by having the committee submit annually a program for the succeeding year. This would afford the House of Delegates an opportunity to criticize, make changes, and give instructions relative to the execution of the program, as deemed in the best interest of the Association. In order to give concrete opportunity for such action on the part of the present House of Delegates, and to illustrate the workings of such procedure, the committee recommends as for the coming year the program tentatively submitted by this committee last year.

Should the recommendation relative to the composition of the committee be accepted, then the further recommendation is made that this committee be constituted in its personnel immediately following the election of the officers for the coming year and the committee organized at once for work, while there is opportunity for its members to get into personal communication with one another.

REPORT OF COMMITTEE ON SCIENTIFIC WORK 1922

Should the House of Delegates not care to adopt the recommendations herein above made, then the committee recommends that it be abolished, because it has not functioned in the past and is not functioning in the present and apparently cannot function as at present constituted and circumstanced.

Finally, the committee wishes to call attention to the fact that all of its recommendations herein above made do not involve Constitutional amendments, but are entirely within the province of the By-Laws. Therefore, should the House of Delegates think well of any of them, a majority vote

will incorporate them into the By-Laws.

Respectfully submitted,

F. B. Johnson,

W. F. R. Phillips, Chairman.

W. R. Wallace.

The report which your committee on scientific work, hereby submits is not on what the committee has done in connection with the preparation of the program of the present meeting, but the committee's conception of how the scientific work of the Association might be more systematically planned, and being so, become more generally advan.ageous to the Association as a whole and its members individually.

The By-Laws prescribe that the committee on scientific work shall determine the character and scope of the scientific proceedings of the Association, subject to the instructions of the House of Delegates. The apparent intent of the By-Law, it seems to the committee, is that there shall be some antecedent communication of the committee to the House of Delegates before the committee can with propriety assume the important duty of deciding what shall and what shall not be the scientific work of any given meeting of the Association. The House of Delegates meets, except extraordinarily, but once a year and that on the day before the general meeting of the Association, the meeting that is devoted almost exclusively to the scientific activities of the Association. As the practice appears to be, the committee on scientific work is appointed annually and usually of an entirely new personnel, and after the House of Delegates has adjourned. Hence, the committee has no opportunity to communicate with and receive advice and instruction from the House of Delegates regarding the scientific work of the next Association year. The annual change of personnel and the inability of the new committee to communicate with the House of Delegates have worked to the end that there is neither tradition nor continuity of purpose passed on from year to year—the committee is hardly acquainted with itself and has not the benefit of the experience or of the suggestions that may have come to committees of preceding years. Under these circumstances, the difficulty, not to say impracticability, of any systematic conduct of the scientific activities of the Association as a whole is apparent. Consistent and fruitful work in any field of activity can be carried forward only where some definite plan and purpose is always in mind and guiding the energies put forth.

Therefore in view of the foregoing, it seems to your committee that the by-laws should be modified to provide that the committee on scientific work shall annually formulate provisional program and present it to the House of Delegates for consideration; after action by the House of Delegates the committee shall then be charged with the details of its execution, supplemented with whatever specified or general instructions and powers that the House may deem requisite or advisable to give. The advantages that appear to the committee that would follow the adoption of such a procedure are:

1. Earlier and more general information regard.ng the scientific program of the next annual meeting.

2. Greater probability of the program embodying subjects of interest to the majority of the members, and of interesting more members in the subjects of the program.

3. Interesting more persons in the preparation of the program.

4. Affording more time to those specially interested in the subjects to be considered to inves.igate and perfect whatever they may contribute to the program.

Carrying out the idea embodied in the foregoing generalized consideration of procedure, the committee presents a provisional formula of purpose and procedure for your consideration in the shape of certain propositions, illustrated wherever admissible by concret suggestions, as follows:

1. That one or two subjects be chosen for collective clinical investigation every year.

Every member whose activities may bring him in relation to either or both of these subjects being requested to study them so far as possible, to reduce his observation, facts, and opinions to writing and communicate them for collation and report to a special committee, to be known as the special committee on collective clinical investigation. This committee to report at the annual meeting the results of the investigation.

Suggested subjects for 1923:

Pellagra,

Fevers of a typical character.

2. That two or three general special subjects be assigned annually to a special committee, or committees, for review of progress made therein as determined by an examination of recent literature, and to present a summary or commentary thereon at

the annual meeting. This committee, or committees, to be known as the special committee, or committees, on review of progress in the subject or subjects assigned.

Suggested subjects for 1923:

Cardiovascular diseases,

Disorders of the thyroid.

3. That some subject relating to the sociological aspect of medicine be chosen annually for general consideration and discussion at the annual meeting; that two members be specifically selected to open the discussion, after which it be opened to all. This general discussion could well be conducted somewhat after the manner of a round table conversation.

4. That the equivalent of one day, 8 to 10 hours, be allotted to individual papers of the usual sort, that is, papers on topics that the writers are individually interested in presenting to the Association.

5. That provision be made annually for one or two addresses by some member or members of the profession, but not of this Association, who has, or have, attained distinction in medicine. The subject, or subjects, of the address, or addresses, to be determined by the President of the Association after conference with the committee on scientific work.

6. That to hold a good general attendance of two days, which experience appears to be the maximum period that a fair attendance can be held, the House of Delegates meet hereafter on the evening of the first day of the meeting.

7. To assure two full days to the scientific work of the Association, that no entertainments be provided by the committee on local arrangements that shall in any manner conflict with the times set for the work of the Association. While appreciating the spirit of hospitality that actuates members of the place of meeting to extend entertainment to the Association, the Association holds that the best interests of the organization are to be found in its scientific and not in its social pleasures.

Thos. J. Davis,
Robt. A. Marsh,
W. F. R. Phillips, Chairman.

BOOK REVIEWS

The Fourteenth Edition of PATTEE'S PRACTICAL DIETETICS. (Completely revised) The universally adopted text; many important new features.

PRACTICAL DIETETICS is the latest and most authoritative dietetic text issued since the publication of the **"Recent Outline of a Course of Study in Dietetics"** issued by the **American Dietetic Association.**

PATTEE'S TEACHER'S DIETETIC GUIDE —given gratis with "Practical Dietetics" —includes this outline with specific reference to pages in "Practical Dietetics" where replies may be found. "Practical Dietetics" also follows the outline arranged by the **National League of Nursing Education.**

ABT'S PEDIATRICS. By 150 specialists Edited by Isaac A. Abt, M. D., Professor of Diseases of Children, Northwestern University Medical School, Chicago. In eight octavo volumes totaling 8,000 pages with 1,500 illustrations, and separate Desk Index volume free. Now ready—Volume 1 containing 1,240 pages with 284 illustrations. Volume 11 containing 1025 pages with 180 illustrations. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, $10.00 per volume. Sold by Subscription.

TEACHER'S DIETETIC GUIDE—to accompany Pattee's Practical Dietetics. Given gratis with each copy of Pattee's Practical Dietetics. Not sold separately. A. F. Pattee, publisher, Mount Vernon, New York. Printed in U. S. A., 1923.

HABITUAL CONSTIPATION—its causes, consequences, preventions, and rational treatment set forth in non-technical language. By Ismar Boas, M. D., Professor of Medicine in Berlin. Translated by Thomas L. Stedman, M. D., author of "A Practical Medical Dictionary", editor of "A Reference Handbook of the Medical Sciences. Formerly editor of the Medical Record. Funk and Wagnalls Company, New York and London, 1923. This is

one of the best books ever presented to the laity on the subject.

GYNECOLOGY. By William P. Graves, M. D., Professor of Gynecology at Harvard Medical School. Third Edition, Thoroughly Revised. Octavo volume of 936 pages with 388 half-tone and pen engravings and 146 microscopic drawings, 103 of the illustrations in colors. Philadelphia and London: W. B. Saunders Company. 1923. Cloth, $9.00 net.

The professors of the Harvard Medical School have always been looked upon as capable of leadership. Dr. Graves presents a magnificent volume of scientific value second to none. The illustrations are especially fine, giving the operative technique in the minutest detail.

CLINICAL DIAGNOSIS. By Laboratory Methods. A Working Manual of Clinical Pathology. By James Campbell Todd, M. D., Professor of Clinical Pathology, University of Colorado. Fifth Edition, Enlarged and Reset. Octavo of 762 pages with 325 illustrations, 29 in colors. Philadelphia and London: W. B. Saunders Company, Cloth, $6.00 net.

Todd's Clinical Diagnosis stressing the importance of a laboratory has been a popular book for a number of years. Laboratory procedures are subject to such rapid changes that frequent revisions become necessary. The illustration are good and the entire work creditable.

Strictly Up to the Minute.

PHYSICAL EXAMINATION AND DIAGNOSTIC ANATOMY. By Charles B. Slade, M. D., formerly Chief of Clinic in General Medicine, University and Bellevue Medical School. Third Edition, thoroughly revised. 12mo of 179 pages illustrated. Philadelphia and London: W. B. Saunders Company, Cloth $2.00 net.

A thorough knowledge of anatomy from the diagnostic standpoint is highly desirable as a ground work for the medical student.

In this book the author endeavors to emphasize such teachings.

A PRIMER FOR DIABETIC PATIENTS. A Brief Outline of Diabetic Treatment, Including Directions for the Use of Insulin, Sample Menues, Receipes and Food Tables. By Russell M. Wilder, M. D., Mary A. Foley, and Daisy Ellithorpe, Dietetians The Mayo Clinic. Second Edition, Reset. 12mo of 119 pages. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, $1.50 net.

Most of the literary output of the Mayo Clinic attracts the eye of the medical man throughout the world. This little book is no exception. It is intended to put into the hands of the patient and has been revised and rewritten since the discovery of insulin.

A TEXT-BOOK OF ANATOMY AND PHYSIOLOGY, By Jesse F. Williams, M. D., Professor of Physical Education. Teachers College, Columbia University, New York City. 12mo of 523 pages with 369 Illustrations. Philadelphia and London: W. B. Saunders Company, 1923. Cloth $3.00 net.

The writer of this volume occupies a position furnishing an important field of research and teaching experience.

The result of this opportunity has been presented in an admirable way in book form. The illustrations are unusually good.

THE EXAMINATION OF PATIENTS. By Nellis B. Foster, M. D., Associate Physician to the New York Hospital; Associate Professor of Medicine at Cornell University, College of Medicine. Octavo of 253 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1923. Cloth $3.50 net.

An increasing number of books are appearing on the examination of the patient. This is the best one we have seen yet.

Every physician in time develops his own scheme of bedside or office examination of his patients, yet, suggestions from other men are often valuable.

A MANUAL OF THE PRACTICE OF MEDICINE. By A. A. Stevens, M. D., Professor of Applied Therapeutics in the University of Pennsylvania. Eleventh Edition, Entirely Reset. 12mo of 645 pages, illustrated. W. B. Saunders Company, Philadelphia and London: 1923. Cloth, $3.50 net.

Steven's Manual is a very practical handbook for the student or the practitioner. Having gone through eleven editions shows the popularity of the author.

THE PROGNOSIS OF INTERNAL DISEASES. By Henry L. Elsner, M. D., LL. D. Professor of Medicine, College of Medicine, Syracuse University. New York and London. D. Appleton and Company. Only a physician of vast experience and

wide knowledge of Medicine and Surgery should attempt a work on prognosis. The author of this volume measures up to these requirements.

The subject matter reflects not only the ripe experience of the clinician but the attainments of a brilliant scholar as well.

PRINCIPLES OF VITAL STATISTICS. By I. S. Falk, Ph. D., Department of Public Health, Yale University. Octavo of 258 pages, illustrated. Philadephia and London: W. B. Saunders Company, 1923. Cloth $2.50 net.

The study of vital statistics rarely interests the average physician. He has not been trained to any great extent along this line as a student and his life work is mainly curative medicine.

It is important though to understand this subject and the little book before us will go far toward this end.

A CLINICAL GUIDE TO BEDSIDE EXAMINATION. By Dr. H. Elias, Dr. N. Jagic, Dr. A. Luger, University of Vienna, Austria. Arranged and Translated by Wm. A. Brams, M. D., Chicago, Ill. New York Rebman Company.

History taking and the ordinary scientific regime of examining a patient at the bedside continue to be of vast practical importance. This little book presents in a clear cut way such routine of examination and represents something of the famous Vienna School.

TEXT-BOOK OF PEDEATRICS. Edited by Professor E. Feer, Director of The University Children's Clinic, Zurich. Translated and Edited by Julius Parker Sedgwick, B. S., M. D., Professor of Pediatrics, University of Minnesota, Medical School and Carl Ahrendt Scherer, M. D., F. A. C. P., Duluth, Minnesota. 262 Illustrations. First Edition in English, Philadelphia and London. J. B. Lippincott Company.

While Pediatrics has made great advances in the United States. Books presenting the European view point are helpful to the student and practitioner.

A large number of authorities contributed to this volume.

RUBBER AND GUTTA PERCHA INJECTIONS. By Charles Conrad Miller, M. D., Chicago.

Prelimnary report of the use of various forms of rubber and gutta percha subcutaneously for the purpose of raising the depressed nasal bridge and filling in various tissue deficiencies. Illustrations and descriptions of the types of material used, the manner of preparation, and special syringes used by the writer. Price $1.75 prepaid. Oak Printing & Publishing Co., Chicago.

THE COMPLETE MEDICAL POCKET-FORMULARY AND PHYSICIAN'S VADE-MECUM. Collated For The Use of Practitioners by J. C. Wilson, A. M., M. D. Sixth Edition, thoroughly Revised by Creighton H. Turner, M. D., Philadelphia, J. B. Lippincott Company.

This volume contains thousands of prescriptions found useful by physicians all over the world.

INTERNATIONAL CLINICS. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Orifinal Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynaecology, Orthopaedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Larygology, Hygiene, and other Topics of interest to students and practitioners. By leading members of the Medical profession throughout the world. Edited by Henry W. Cattell, A. M., M. D., Philadelphia, U. S. A. With the Collaboration of Chas. H. Mayo, M. D., Rochester. Sir John Rose Bradford, M. D., Lodon; William S. Thayer, M. D., Baltimore; Frank Billings, M. D., Chicago; A. McPhedran, M. D., Toronto; Sir Humphry Rolleston, K. C. B., M. D., D. C. L., London; Seale Harris, M D., Birmingham, Alabama; Hugh S. Cumming, M. D., D. P. H., Washington, D. C.; John G. Clark, M. D,, Philadelphia; James J. Walsh, M. D., New York; Charles Greene Cumston, M. D., Geneva; John Foote, M. D., Washington, D. C.; Charles D. Lockwood, M. D., Pasadena, California. Correspondents: A. H. Gordon, M. D., Montreal; James Burnet, M. D., Edinburg. Volume III. Thirty-Third Series, 1923. Philadelphia and London. J. B. Lippincott Company.

ALCOHOL AND PROHIBITION. In their relation to civilization and the art of living by Bictor G. Vecki, M. D., San Francisco, Calfornia, Philadelphia and London. J. B. Lippincott Company.

The author is a clever writer on any subject and ownig to his scholarly attainments has presented herewith an attractive resume of the alcohol question.

THE SURGICAL CLINICS OF NORTH AMERICA. October, 1923, Volume 3—

Number 5. Minneapolis—St. Paul Number. Published Bi-Monthly, W. B. Saunders Company, Philadelphia and London.

THE SURGICAL CLINICS OF NORTH AMERICA. August, 1923, Volume 3—Number 4. Chicago Number. Published Bi-Monthly W. B. Saunders Company, Philadelphia and London.

INTERNAL MEDICINE. A Work for the Practicing Physician on Diagnosis and Treatment with a Complete Desk Set. In three volumes, illustrated with 427 Text illustrations and 14 in color.

MEDICAL DIAGNOSIS. Sixth Edition Revised and Enlarged in Two Volumes. Volume 1: Medical Diagnosis in General; The Methods and Their Immediate Results; Symptoms and Signs, Tests. By James C. Wilson, A. M., M. D., Emeritus Professor of the Practice of Medicine and Clinical Medicine in the Jefferson Medical College and Emeritus Physician to Its Hospital; Physician Emeritus to the Pennsylvania Hospital and Physician-in-Chief to the Lankenau Hospital, Philadelphia. Formerly Captain M. C. U. S. A. Assisted by Creighton H. Turner, M. D. "The Whole Art of Medicine is in Observation." Philadelphia and London, J. B. Lippincott Company.

Monographic contributions in the form of books or otherwise have much to commend them. These three volumes constitute an excellent working library for the active practitioner. The volume on treatment covers in a brief but authoritative manner, the diseases mentioned in the two volumes on diagnosis.

HUMAN ANATOMY. Including Structure and Development and Practical Considerations. By Thomas Dwight, M. D., LL. D. Late Parkman Professor of Anatomy in Harvard University; Carl A. Hamann, M. D. Professor of Applied Anatomy in Western Reserve University; J. Playfair McMurrich, Ph. D. Professor of Anatomy in the University of Toronto; George A. Piersol, M. D., Sc. D. Professor of Anatomy in the University of Pennsylvania; and J. William White, M. D., Ph. D., LL. D. Emeritus Professor of Surgery in the University of Pennsylvania With Seventeen Hundred and Thirty-Four Illustrations, of which Fifteen Hundred and Twenty-Two are Original and Largely from Dissections by John C. Heisler, M. D. Professor of Anatomy in the Medica-Chirurgical College. Edited by George A. Piersol. Seventh Edition. Philadelphia and London, J. B. Lippincott Company.

This splendid Anatomy published at an enormous expense is highly representative of best publications of the kind in the world. The illustrations are superb.

Correspondence

THE NEW COMPETITION

Many progressive manufacturers and merchants say that the cut price bait is losing its attraction. They are paying less attention to this method of getting more business, and more attention to the idea of quality merchandise service. They believe the results so far achieved justify the statements that their customers will be better served and their own profits enhanced by giving more attention to quality, and less to price.

Real service is what counts. While many people will shop about for prices, the great majority are better satisfied with quality merchandise and good service at a fair price. This makes for confidence—the corner stone of satisfaction.

Mr. Charles Wesley Dunn, Counsel for a number of large manufacturers in this country, has given this problem a great deal of thought. His conclusion is that we are now approaching the time when the real competition will be in merchandise and service rather than in price.

As a nation, we have developed to the highest degree the science of quantity production. Now, with characteristic American progression, it is only natural that we are experiencing a very definite trend

toward the development of *quality* production.

Dr. Earl Miller has been appointed Director of the Department of Experimental Medicine of Parke, Davis & Company, Detroit, to fill the vacancy following the death of Dr. Ezra Read Larned, who was the originator and organizer of this department and occupied the position as head of the department until his death.

Dr. Miller was assistant to Dr. Larned for twelve years and has a wide acquaintance among medical men interested in clinical research work.

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